PAPERS ON HEALTH

BY PROFESSOR KIRK

EDINBURGH.

- With - Love - from - Will

Manchester Dec 4 1908

D. Edwards

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NEW AND COMPLETE ONE-VOLUME EDITION
REVISED AND EDITED BY

EDWARD BRUCE KIRK

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PREFACE.

In his later years my father often expressed to me his desire for the reduction of the eleven volumes of his "Papers on Health" to a compact one-volume edition; but as long as fresh papers were being written, he saw no use in beginning this work. In the end the project was interrupted by his last illness and death. Since then, circumstances have prevented the work being undertaken until the present time.

Having been associated with him in his health work for some years, and having often discussed with him all his methods, I have had considerable advantages in undertaking to carry out his intention in the shape of the volume now given to the public.

It represents as nearly as possible the book he planned himself; and though greatly reduced in bulk, all that is of importance in the original eleven volumes has been inserted in it. It is complete in every way; and in many details of treatment, improved methods, applied in later years by Dr. Kirk, have been substituted for the older methods he first introduced.

The arrangement in alphabetical order has been very carefully attended to, and the treatment for any particular

trouble within the scope of the work can be quickly turned up.

This edition is sent forth in the hope that it may have even a wider circulation than the last, and may be still more largely blessed than that has been, to the relief of suffering humanity.

I would appeal to those who know the value of this treatment to make the book known to the many who would benefit by its teaching. The cost of the original edition was considerable, but this one is sold so cheaply that anyone may possess it.

EDWARD BRUCE KIRK.

E. U. Manse,
Barrhead, Scotland.
September, 1899.

PREFACE TO SECOND EDITION.

In this edition of "Papers on Health" some changes, as well as some entirely new features are introduced.

The large demand for the first one-volume edition has made it clear that the public approve of the methods, both of arrangement and of condensation employed in it.

Another edition being called for, it appeared evident that several changes were desirable, in order to bring the book in line with rapidly increasing medical knowledge, and to give full effect to more recent experiences in the application of Dr. Kirk's treatment.

Since the "Papers" were first written, medical, and especially surgical, practice has very greatly changed, and some of the practices against which Dr. Kirk most vehemently protested have passed away. Hence, certain modifications introduced into this edition, for which the editor accepts full responsibility. For those who wish to consult the actual writings of Dr. Kirk, the original eleven volume edition is still available.

Great advances have also been made in the knowledge of the causes of disease; and preventive methods of treatment by regulation of diet and habits of life are much better understood. To incorporate some reference to

these in a work dealing with health generally, appeared to us absolutely necessary. For these additions also the writer accepts responsibility.

Where it appeared to be useful, illustrations have been introduced, which may help those to whom the treatment is quite new, to practice it more easily and correctly, and to understand better the theories on which it is founded.

These changes have enlarged the book, and somewhat increased the price, which is, however, still such as to place the volume within the reach of all classes.

It is most gratifying to know through letters received from almost all parts of the world, that many are benefitted very greatly by the treatments described. We have constant evidence coming before us from our own experience with patients of the powerful effect they have in healing the sick, and even saving life. We send out this new edition in the hope that it may spread still more widely, the knowledge of such simple and yet effective means of cure.

EDWARD BRUCE KIRK

E. U. Manse,
Barrhead, Scotland.
July, 1904.

INTRODUCTION.

In this book we set forth a series of simple remedies and preventives of many common troubles. They are all well tried and have been proved by long experience to be effective and safe.

We give, as far as we know, the reasons why they are likely to do good, but we acknowledge that there are things which we cannot fully explain. For instance, we do not know why a well aired lather of M'Clinton's Soap should have the soothing effect it undoubtedly possesses, or why spreading handfuls of this lather over the stomach of a person suffering from retching or indigestion should give such relief, we only know that it does!

Some may sneer at the remedy and say it is a case of faith healing and assert that any other application, if put on with equal credulity, would have the same effect. But take a case that lately came under our notice. Indigestion and colic had rendered a baby a few weeks old restless and miserable from the day of its birth. The nurse was kept nursing it all night long, trying to soothe it; at last the mother who had frequently tried the soap lather for occasional attacks of indigestion, and always with good effect, determined to try it on the baby. It worked like a charm, the little one was at once soothed and slept all night, only waking once for its food. This was repeated for several nights, for until the lather was applied the child would not settle to

sleep. In a few days the child was quite well, the habit of sleeping was established and the application was discontinued. Now it cannot be said that faith in the remedy had anything to do with the result in this case. We only wish every mother would have faith enough to give this simple treatment a fair trial, making up the lather as described in this book and not, as many do, "improving" on our method by rubbing the soap on the wet skin and making a sort of lather with the hand.

We may say that the soap used for making this lather is not M'Clinton's shaving soap. The latter is specially made to give a thick durable lather; for curative purposes use the lather from M'Clinton's toilet or household soap.

Again, why should the use of the linen underwear we recommend have such a beneficial effect on sufferers from rheumatism and various skin troubles? We have suggested possible explanations, and if these seem inadequate we can only say we know that it has these effects no matter how they are produced.

There are many things in nature that we cannot explain, and since the discovery of X Rays, Radium, etc., scientists are much less dogmatic in declaring anything impossible.

The diet we recommend for health and disease is as simple and cheap as our other treatment. That plain fare is good for both mind and body was proved by the four youths at the Babylonian Court over 2,000 years

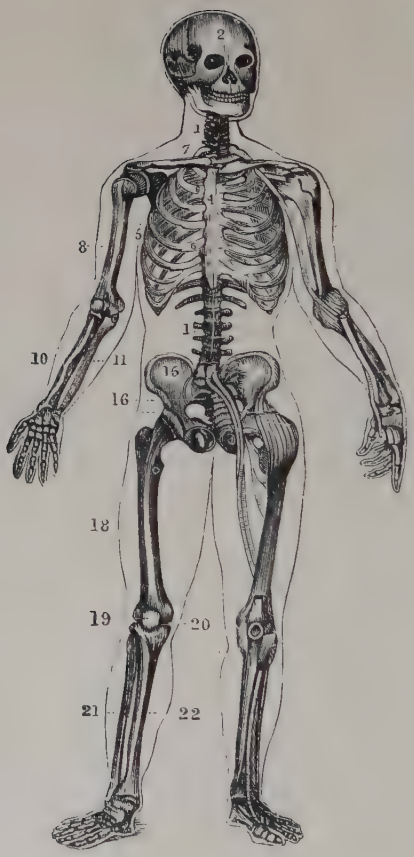
ago, but alas people squander that priceless boon, health, by letting appetite rule their lives.

We only ask for our treatment a fair trial on our lines. We claim that ours are common sense methods. Anyone can see that if a head is hot and fevered the application of a cold towel is likely to lower that heat and reduce the fever. But it is no use putting a little bit of wet rag on and then saying our treatment has failed. Large towels repeatedly changed for an hour or more may be needed, and this will give more trouble than administering some dose from the chemist's shop, but the results are well worth the additional work.

The day is hastening on when men and women will see what fools they have been, not because they had no sense, but certainly because they had failed to use the abundance which God has given to all.

Not one of the remedies we have recommended can hurt any one, as they are only those which we have for years seen used successfully by ordinary persons who were willing to do their best to cure the suffering. If we can secure one night of sound sleep, or one day of comfort for another, we are bound to do our very best, and it is a wonderful reward to know that one has secured even this in our suffering world. Our Heavenly Father gives no monopoly of this blessing.

Note.—It is earnestly requested that *the whole* of any article, and of those referred to in it, should be read *before* beginning any treatment.



1, Vertebral Column; 2, Skull; 4, Sternum; 7, Collar Bone; 15, Hip Bone; 16, Sacrum; 18, Femur; 19, Knee Pan; 21, Fibula; 22, Tibia; 8, Humerus; 10, Radius; 11, Ulna.

Abscess.—Let us suppose a swelling appears on some part of the body or limbs, but that there is no discoloration or symptom of the gathering of the dead material beneath it. If it be cut open, a wound is made which is often very difficult to heal. Avoid then, *cutting* in such cases. If the swelling develops under FOMENTATION (*see*), the uncut flesh through which it will then break will be in a better state eventually for healing than if cut. Where corrupt matter is clearly present, and in seeking an outlet is endangering the surrounding healthy tissue, the cutting open of the swelling will, on the other hand, greatly relieve, and conduce to a more speedy cure. This is best performed by a thoroughly good surgeon. Thorough syringing of the cavity from which the matter comes out (*see* WOUNDS, SYRINGING) is the best means of cure, aided by thorough heating of the swelling and surrounding parts with moist heat for an hour or more twice a day. This heating must embrace a large part of the limb or body, as the case may be. If the trouble be on the hip or groin, the armchair FOMENTATION (*see*) should be employed. Other parts should be treated on the same liberal principle of heating (*see* FOMENTATION).

Rich diet is extremely hurtful. Egg switched in cream, rum, brandy, and such things are to be carefully avoided. Alcoholic liquors are especially fatal. *See* ALCOHOL, ; ASSIMILATION ; DIET ; DRINKS : FOODS, etc.

Oatmeal jelly (*see* FOOD IN ILLNESS), wheaten meal porridge, Saltcoats biscuits (*see* BISCUITS AND WATER), form the best nutrients in such cases. These are really much stronger diet than the egg, brandy, etc.

If the abscess be in the foot or leg, with indications of diseased bone, the leg should be bathed in hot water up to the knee. Dissolve a piece of M'Clinton's soap in the water used, and let it be as hot as can be borne. After drying, rub the limb gently yet firmly with olive oil for five minutes. Dress with oil, lint, and a proper bandage.

We have seen a limb which threatened the very life of the patient treated as above. The general symptoms abated almost immediately ; growth, as well as healing, set in, and the limb was quite restored to its normal condition. But patient persistence in treatment is needed for a bad case.

If under bathing or fomentation the abscess seems to swell, such is only the natural progress of cure, and should not be regarded as increase of the trouble. Where the swelling shews undoubted signs of diseased matter below the surface, it may be opened as above directed. We know of limbs that have been long distorted, and under rubbing and fomenting they are becoming gradually all they ought to be. No one need fear that by such treatment they will grow worse. *See* ARMPIT SWELLING ; BONE, DISEASED ; KNEE ; LIMBS, INFLAMED, etc.

Acetic Acid.—For use in our treatment we recommend Coutts' Acetic Acid. It is of uniform strength and purity, and can be had from most druggists. Weak acid may be understood as one part of this to twelve parts of water. In many cases, however, much greater weakness than this is necessary, owing to the tenderness of the parts treated. As a general rule, the dilute acid should only cause a *gentle* nipping sensation and heat in the sore. If it is painful, no good is done. Frequent gentle applications are always much better than a few severe ones.

Tasting the acid is a good test. If it can be swallowed without inconvenience, it may then be tried on a tender part, and if necessary even further reduced in strength. Where more convenient to get it, white wine vinegar may be used instead of this weak acid ; it will do equally well.

Acidity of the Stomach.—Often caused by unwholesome food, bad or deficient teeth, or by too rapid eating. Where these causes exist, they should be first removed. Eat slowly, and not too much at a time, and see that only *well-cooked*, easily digested food be taken. Pastry, sweets and carbonaceous foods in general should not be taken alone at the same meal, they should always accompany some form of proteid food. If, however, pain in stomach is found after meal it will be found that milk can be substituted with comfort. (*See* DIET). (*See* FOOD IN HEALTH). If this does not cure, do not take soda as a remedy. Although soda neutralises the sourness, it produces other effects, and tends to cause disease of the stomach. A wineglassful of hot water, with a teaspoonful of white vinegar in it, is the best cure. Although this is itself acid, it acts so as to remove the *cause* of the sourness in the stomach, and is most beneficial otherwise. It is still better to take a tablespoonful of this hot water and vinegar every five minutes for an hour daily before dinner. Instead of the vinegar, a slice of lemon may be put in the hot water. This will act more efficiently in some cases. In other cases a teaspoonful of Glauber's Salts, taken in a *large* tumblerful of hot water, half-an-hour before breakfast, for a few weeks, will relieve almost entirely.

Readers must note not to use *both* the salts and vinegar drink at once. They are intended to cure different sorts of stomach acidity, caused differently.

Look also well to the warming of COLD FEET (*see*), and see that the whole skin be cleansed daily with soap lather (*see* LATHER & SOAP) and stimulated with olive-oil rubbing.

Aconite.—Often in cases where our treatment fails to cure, the failure is due to the patient taking aconite as an

allopathic remedy. Used homœopathically, it may be harmless, but if taken in considerable doses, even once a month, it prevents all cure. It gives relief in heart palpitation, and in case of extreme sensibility, but its other poisonous effects far outweigh the temporary benefits. A gentle, kindly soaping with soap lather (*see* LATHER and SOAP) over all the body will relieve extreme sensibility far better than aconite, and can be frequently repeated without injury. Aconite must be avoided if our treatment is to be effective.

Action, Balance of.—An excellent guide to the proper treatment of any case is to be found in the distribution of heat in the patient's body. Hot parts are to be cooled, and cold parts warmed, often both at the same time, so as to restore the proper balance of vital action. *Gentle progressive* measures are always best in this, especially with children. Cold feet are warmed by BATHING (*see*) and FOMENTATION (*see*). A heated head may be cooled with COLD TOWELS (*see*) or with soap LATHER (*see*). This principle of seeking a proper balance should be borne in mind throughout all our treatment. Its importance can hardly be exaggerated, as the restoration of this balance alone will frequently effect an almost magical cure where drugs have been wholly ineffective.

After Pains.—*See* CHILD-BEARING.

Air.—The Black Hole of Calcutta is an object lesson of how necessary to life is the renewal of the air supply. Few people, however, reflect that a deficient supply of fresh air may affect the health, though far short of what will cause death. Many hospitable people will invite so many friends to their houses that the amount of air each can get is less than 1-20th of what the law insists shall be provided for the prisoners in our gaols. Superabundant provision is made for the wants of the stomachs of these guests, but none at all for the more important organ—the lungs. The headaches and lack of appetite next morning are attributed to the supper instead of the repeatedly breathed

air, for each guest gives off almost 20 cubic feet of used-up air per hour. No one would ask their guests to wash with water others had used; how many offer them air which has been made foul by previous use? Everyone knows that in our lungs oxygen is removed from the air inhaled, and its place taken by carbonic acid gas. Besides this deoxydizing, the air becomes loaded with organic matter which is easily detected by the olfactory organs of those who have just come in, and so are in a position to promptly compare the air inside with what they have been breathing. The exhilaration produced by deep breathing of pure air is well known. What, therefore, prevents everyone enjoying it at all times? Simply the fear of "cold"—an unfortunate name for that low form of fever properly called catarrh, and a name which is largely responsible for this mistaken idea. "Colds" are now known to be infectious, being often caught in close ill-ventilated places of public assembly. Most people suppose that it is the change from the heat to the cold outside that gives them "cold," whereas the "cold" has been contracted inside. There is no lack of evidence that wide open windows day and night, summer and winter, so strengthen and invigorate that colds are rarely taken, and when taken, generally in a mild form. This also applies to influenza. If delicate consumptives can stand, without any gradual breaking-in to it, unlimited fresh air, and can lie by day and night in open sheds, no one need dread at once to adopt the open-window system. Although few will believe it, until they try it, a wide open window does not produce a draught as does one slightly opened, and it is safer and pleasanter to go in for abundant fresh air than to try what might be called a moderate course. Many think that with an open window the heat of the fire is practically wasted. They do not know that the *radiant* heat of the fire will warm the person it falls on even though the temperature of the room is very low. The Canadian hunter before his fire is comfortably warm,

though the air around him may be a long way below zero. Extra clothing may be worn if any chilliness is felt. While the body is warm cold air has an invigorating effect on the lungs. Indeed, the body soon gets accustomed to the colder air, and those who practise keeping open windows winter and summer find that they do not require heavier clothing than those who sit with windows shut. A slight or even considerable feeling of coldness, when due to cold air and not to ill-health, will not harm.

This is no new idea. Dr. Henry McCormac, of Belfast, father of the eminent surgeon, Sir William McCormac, wrote forty years ago :—"The mainly unreasoning dread of night air, so termed, is a great impediment to free ventilation by night. And yet day and night air is the same virtually, does not differ appreciably. The air by night, whether damp or dry, is equally pure, equally salubrious with the air by day, and calls not less solicitously for ceaseless admission into our dwellings. Air, ere it reaches the lungs, is always damp. Quite dry air is irrespirable. It needs no peculiar or unusual habitude in order to respire what is termed night air. Exposure to contact with the day air equally prepares us for exposure to the contact with the night air. We can multiply our coverings by night with even greater ease than we can by day, and with the most perfect certainty of producing and obtaining warmth. Good heavens ! How is it that people are so wildly mistaken as if the great wise Deity, as he does by every exquisite and perfect adaption, did not intend that we should make use of the purest, sweetest air day and night always ? The prospective results of breathing purest air by night are so infinitely desirable, the immediate enjoyment is so great that it only needs a trial to be approved of and adopted for ever. . . . Reasonable precautions—that is to say, adequate night coverings—being resorted to, no colour of risk to the lungs, even of the most delicate, can possibly ensue. For, it is stagnant air, air pre-breathed only, and not pure unprerespired air that

makes lungs delicate. Although air, warmth, food, and cleanliness be cardinal conditions and essential to life, still the most important of all health factors is air—air pure and undefiled alike by day and by night. . . . The constant uneasy dread of taking cold, which haunts the minds of patients and their friends, is doubtless the one great reason why fresh air is thrust aside. And yet cold will not be caught, were it in Nova Zembla itself, by night, if only the sleeper's body be adequately covered. . . . The pulses or puffs of air that comes in ceaselessly, winter and summer, through open windows by night inspire just as one slept in the open air, a sort of ecstasy. Gush follows gush, full of delightfulness, replacing the used-up air and purifying the blood. It has oftimes been said to me, 'I open the windows the moment I get out of bed;' to this I have uniformly replied, 'the moment to open the window is before you get into bed, not when you get out of it.' You cannot otherwise with entire certainty secure the benefit of an ever ceaselessly renewed night air so all essential to the blood's renewal and the maintenance of health. . . . With abundant night coverings there is no shadow of risk. There is none of rheumatism, none of bronchitis, in short no risk whatever. The only, the real risk, which we incur, is that of closing our sleeping chamber windows, of debarring ourselves of pure air during our repose."

Appetite.—Should be an indication that food in general or some certain kind of food is needed by the body. Thus the appetite is the natural test of the amount and kind of food required. Over-eating and indulgence in stimulating foods and drinks, insufficient mastication and bolting of the food (*see* OVER-EATING, etc.) give us a false appetite, thus causing over-eating once more. A return to a simple and moderate diet will restore the natural appetite.

Air Bath.—This may with advantage to the health of the skin and body in general, be indulged in every morning

during some of the toilet operations, such as shaving, or preferably, dumbell exercise or Swedish gymnastics. If exercises are done in a nude condition the utmost freedom for the muscles is obtained. In a short time a notable change will be observed in the skin, which will lose its pasty appearance, and become soft flesh and of a healthy colour. If possible have the bedroom with windows facing the morning sun, so that the sunlight can also shine in. There are many sanitaria on the Continent and in America where this form of "bathing" is practised. Indeed, one of the great benefits of sea-bathing (overlooked in this country) is the exposure of the skin to air and light. Consequently if the weather and social custom permits, as much time as possible should be spent after immersion, lounging on the sand. A child's natural instinct leads it to play about after its bath in the sea instead of coming at once to be dressed.

A young infant will enjoy lying on a rug on the floor without any clothing and with the window open. Older children will benefit by running about the garden in summer time in bare feet, and with only one garment, say a cotton frock.

It is a great mistake to clothe children too warmly, indeed, the same may be said of adults. Garments should always be loose and porous, so as to allow of the beneficial action of the air on the skin. One of the objections to corsets is that they do not fulfil these conditions (*see* TIGHT LACING, SKIN, CARE OF.)

Air-tight Covering.—The covering of oiled silk, or guttapercha, so frequently placed over wet bandages when these are applied to any part of the body, is not only useless, but often positively hurtful. It is true that the waterproof covering retains the moisture in the bandage, but it is also true that great heat is developed, and the waste products in the perspiration are retained on the surface of the skin. The effect of this is injurious in a very high degree. A little soft old linen for the wet bandage, with a piece of double new flannel over it, will leave all the pores of the skin open,

and allow all waste products to pass away freely, while the heat and moisture are retained as much as necessary.

In other cases two folds of moist flannel next to skin, and two folds of the same, dry, above the moist ones, will make an excellent bandage. This applied all over the abdomen, in case of abdominal dropsy, will have a most beneficial result.

The reason why we often say new flannel is simply that few know how to wash it so as to retain its soft and porous nature as it is when good and new. That softness and porousness may be retained in a very easy way. When you have put your soiled flannel through two good washings with soap in the usual way, dip it in clean boiling water, and finish cleaning it with that dipping. You will have it white and fine as when new.

M'Clinton's soap, being made from plant ashes and not from soda, is much less liable to shrink and harden flannel; in fact, it is best for all fine washing.

Alcohol.—This, in various forms, as brandy, whiskey, rum, wine, cordials, beer and stout, is a frequent prescription in many troubles. In no cases have we known good effects from its use, which is most strongly to be condemned. Various reasons for this statement will be found under the heading of troubles for which alcohol is prescribed. Here we simply give the fundamental truths as to its action on the system.

In our system of treatment we ever seek to nurse and stimulate those nerve-masses which constitute the sources of vital action. Every drop of alcohol does so much to weaken and destroy these. A certain quantity, if taken by the strongest man, will kill that man as surely as a bullet in the brain. Half the quantity will only render him insensible. Half that, again, only renders him incapable of controlling his bodily movements. Half that, again, only slightly disturbs the system; but it affects him in the very same manner in which the fatal dose

affects him, though not in the same degree. It is a narcotic, and like all such, it always *reduces* vital action, while nothing is more important in all healing than to *increase* it. Hence alcohol is the deadly foe of healing, and one chief preparer of the system to fall before disease. The so-called stimulating action of alcohol has been thoroughly explained by the author of these papers in other writings, and shewn to be simply an indirect and temporary effect, obtained at the price of a considerable reduction of the general vitality of the nervous system.

Young ladies, as a class, are subject to a terrible danger. Great numbers of mothers actually make their daughters drunkards by ever and again dosing them with brandy. This is done in secret, and imagined to be a most excellent thing. For instance, if the bowels get lax, as is the case in certain stages of disease, brandy is given as a remedy. How little do those who give it know that it is lessening vital energy and making cure impossible! But it is doing nothing else. We have many times over seen the dying sufferer restless and ill with nothing but the effects of constant small doses of brandy, or alcohol in some other form.

In looseness of the bowels we give a teaspoonful of lemon juice in a little hot water and sugar. That has as much effect as is desirable, and it has no bad effect whatever. Or enema injections may be employed. (*See* DIARRHŒA, DYSENTERY, ENEMA). Even infants are treated with "brandy," till we cannot help believing they die of the drink, and would survive if it were put away. Gradually the cruel folly of all this will, we doubt not, dawn upon the general mind.

Amputations.—These are often performed in cases in which proper treatment on the lines of these papers, would save both life and limb. By all means, before consenting to such an irrevocable act as amputating a limb, let the treatment with fomentations, hot water, and acetic acid be well

and thoroughly tried. Many limbs which were medically condemned have been thus saved within our personal knowledge. In some cases the disease may be obstinate; but at least let a fair trial be given to our treatment before giving up a limb. The treatment will be found under the headings of the various troubles and parts affected (*see* ARMPIT SWELLING; BONE, DISEASED; KNEE-SWELLING; PAINS, etc.

Angina Pectoris.—In a variety of cases, more or less severe spasmodic pains are felt in the chest. Angina Pectoris (literally, *agony of the chest*) is one of the worst of these. All these pains, as a rule, may be removed completely by treatment such as the following :—

Prepare a bed (long enough for the patient to lie at full length upon his back), with a large thick sheet folded on the lower part of it. Spread over this sheet a blanket wrung out of hot water, so as to be both moist (but not wet) and warm (*see* FOMENTATION). See that the blanket is not so hot as to burn the patient and add to his pain. It must be tested with the back of the hand, and be just as warm as this can well bear. On this let the patient lie down, and wrap him up tightly in it from the feet up to above the haunches. Have two or three towels folded so as to be about six inches broad, and the length of that part of the patient's spine above the hot blanket. Wring these out of cold water. Place one over the spine, so as to lie close along it; on this, place a dry towel to keep the damp from the bed, and let the patient lie down on his back, so as to bring the cold towel in close contact with the spine. When this towel becomes warm, another cold one must be put in its place. After about half an hour's pack and eight changes of the cold towel, the pain in the chest should be subdued for the time. If the cold towel does not heat in five minutes, the patient's vitality is low, and a *hot* cloth should be placed along the spine, and renewed several times, and then another cold one;

but as a rule this will not be required. When taken out of the pack, let the skin be washed with SOAP (*see*) and warm water ; then a slight sponge of nearly cold water, and a gentle rubbing with olive or almond oil. Rub the back first, and gently "shampoo" all the muscles ; that is, knead and move the muscles under the skin so as to make them rub over one another.

If the pain in the chest be of an inflammatory nature, the cold towels must be applied over the place where it is felt, instead of on the spine (*see* INFLAMMATION.)

Ankle Swelling.—When long continued in connection with disease or accident, this sometimes leads to a partial withering of the limb up to its very root. In such a case it is best to deal first with the roots of those nerves which supply the limb, which are, in the case of the legs, in the lower part of the back. It is important to apply light pressure to these roots by gently squeezing the muscles of the lower back. This raises a feeling of gentle heat, which slowly passes down the limbs even to the toes. Then the gentle pressure and squeezing must be carried all down the limb, avoiding any degree of pain, until all its muscles have had their share. While progressing *down* the limb with his rubbing, let the rubber be careful that the individual strokes of his hands be *upwards*, towards the hip. The blood will thus be propelled towards the *heart*, while the *stimulus* of rubbing is conveyed along the nerve trunks towards the foot. The squeezing should be done with a grasping movement of the hands, the limb being held encircled in both hands, thumbs upwards. Warm olive oil is used in this squeezing, and also, if the skin be hard and dry, soap lather (*see* LATHER).

Even slight displacements of bones will disappear under such treatment, if patiently continued day after day, as the patient can bear it without fatigue. In such gentle remedies, perseverance plays a large part. (*See* ABSCESS ; DIET ; EXERCISE).

Ankle, Twisted or Crushed.—Place the foot as soon as possible in warm water, as hot as can comfortably be borne ; keep it there until free from pain, or for an hour, or even more if necessary. If the flesh be torn, dress with cloths wrung out of vinegar or weak acetic acid before placing in the water.

When the bath has done its work, and the limb comes out of the water alarmingly swollen, good and skilful bandaging will do excellent work. If you have at hand an old shirt, or some such thing, tear it into strips about three inches wide, till you have as much material as will swathe the whole limb from behind the toes up to the top of the thigh. This need not be all in one piece, but only so that you may apply it in such a way as to bring a very gentle pressure on the whole surface of the injured limb. It is important that the bandaging should be comfortable. The way in which bandaging is sometimes done is cruel in the extreme. Cases that are a disgrace to humanity are constantly coming under our notice, in which limbs are lost for life by the treatment they receive in this respect. Skilful surgeons do it in the most gentle manner ; they even swathe the limbs in soft loose cotton before they apply the bandages, so that a perfectly equal and comforting pressure may be secured. Lay the limb to rest, well and softly supported in a horizontal position. When the swelling falls, gently tighten the bandage from time to time as required. Each time the bandages are removed for this purpose, sponge the limb with warm vinegar or weak ACETIC ACID (*see*). When the swelling subsides, the ankle may be put again in the hot bath for half-an-hour, and then, if any bones be broken, is the time for setting them right. The ankle will probably turn black. If so, do not apply leeches, but allow the black blood to be absorbed by natural process.

A twisted or bruised wrist or hand is to be treated in the same way. The swelling may also be removed by gentle rubbing *upwards* along the limb, so as to help the blood in its course.

Armpit Swelling.—Often this comes as the result of a chill, or of enfeeblement of the system from various causes. In the early stage, such a swelling should not be treated so as to develop a sore. Treatment with iodine is to be avoided.

The first thing, in this early stage, is to increase vital action in the part, and also in the whole system (*see* ABSCESS). Moist heat is to be applied. Make a BRAN POULTICE (*see*), which should come right round from over the spine, over the swelling, and over the whole shoulder. Let this be kept hot for an hour at least. If it can be thus applied twice a day without too much fatigue, do so. If the swelling softens and becomes less under this treatment, a few cold cloths may be applied to brace the part and aid its vitality. Do not, on any account, make the patient shiver. If the swelling increases and becomes discoloured, keep to the hot treatment until it bursts and discharges. For treatment then, *see* ABSCESS : WOUNDS.

During all this treatment the whole back should be gently rubbed daily with warm olive oil for half an hour, if as much can be borne.

Assimilation.—Is the process whereby the digested food is carried into the blood stream, and thus conveyed to the different parts of the body where the hungry cells are in need of it.

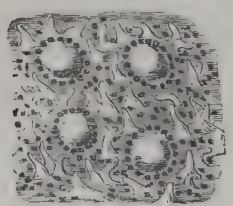
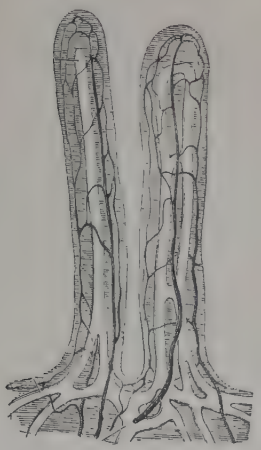


Fig. 1.—A bit of the inner coat of the small intestine.

Fine threads of blood vessels (capillaries) take it up from the stomach and intestines. Also along the intestines there are little projections (villi), through which the food passes into a blood stream leading to the liver, where the blood is then purified. These projections also contain lacteals or little vessels containing blood without its red corpuscles. A duct carries this colourless blood mixed with absorbed food to the left side of the neck, where it empties into

the blood stream. These lacteals have a special affinity for the fat of the food. Most of the rest of the food, including the proteid and the carbohydrate or starchy portion now in the form of sugar, passes into the capillaries, and then is led to the liver.

The liver will not let through more sugar than is required, storing it up for future use. It also acts as a careful guardian, by arresting many poisons which would otherwise pass into the general circulation. The liver requires for the proper performance of its functions plenty of pure blood, hence the necessity for fresh air and exercise, that the lungs may work well. The liver is easily influenced by alcoholic beverages, and by getting too hard work to do through eating rich foods. A consideration of this delicate and intricate process, whereby the digested food is absorbed, will show that badly-digested food can not hope to be well assimilated, consequently attention should be paid to the quantity and quality of the food we eat (*see* DIGESTION, DIET).



(*From "Quain's Anatomy."*)

Fig. 2.—Two villi containing lacteals. The white canals are lacteals, the darker lines indicate blood vessels (capillaries). Magnified 100 diameters.

Whatever thus makes living substance is nourishment; whatever fails to do so is not. If food be taken, and even digested, without being thus assimilated, it becomes an injury to a patient instead of a help. In cases of fever, inflammatory disease, or wasting sores, much rich food feeds the fire. It is like laying rafters on the roof of a burning house for purposes of repair. In such a case small quantities of milk, or milk and hot water (*see* DIGESTION), represent the total food which can be effectively used in the body. We write on this subject

that in treatment our friends may watch not to injure by making the blood too rich in elements which the system cannot usefully assimilate. Such foods as oatmeal jelly and wheaten porridge will often furnish more real nourishment than pounds of bread, beef, and potatoes. A little careful thought will guide to correct treatment in this matter. An easily assimilated diet is found in Saltcoats biscuits and hot water; many inveterate stomach troubles have yielded to this, when taken as sole diet for some weeks (*see* BISCUITS AND WATER).

Treatment may also be given for lack of assimilative power. The back, especially on either side of the spine, is rubbed with gentle pressure and hot olive oil. This pressure is so applied that a genial heat arises along the whole spinal column. This done twice a day, for half-an-hour at a time, and continued for several weeks, will markedly restore assimilative power. Cases which have been perfectly helpless for eight and even ten years are cured by this simple method, sufficiently and carefully followed.

We had a patient who was stout, but weak and weary, with the muscles slack and showing loss of power. The effect of back-rubbing, accompanied by easily assimilated food in small quantities and often, was to lessen his weight by a considerable amount. But the muscular power at once began to increase, and the man was soon like one made anew. Digestion had not been impaired in this case, but the blood formed by it was not converted into good living substance. Sight and hearing have even been restored by these means when the failure in eye or ear has been due to waste material accumulating, as frequently is the case.

In connection with many troubles, what may be called *local assimilation* has to be considered. A foot, say, with a bad abscess or diseased bone (*see* PAIN, SEVERE) is cured by hot bathing and pressure. From a shrunken and feeble limb, the leg grows to a healthy and strong one.

This occurs because the heat and pressure have so stimulated its vitality that the material supplied by the blood can be utilised in the leg for purposes of healthy growth. So with any other part of the body. Such diet as we have indicated supplies easily assimilated substance. The local heating, pressure, and bathing enable this substance to be utilised where it is needed. A little careful thought on this line will guide to proper treatment of almost any case where assimilation has failed, either locally or generally, and will lead the way to a method of cure.

Asthma exists in various forms, having equally various causes. One of these causes, giving rise to a comparatively simple form of the disease, is cramp of the ring-muscle of the windpipe, so contracting the windpipe that breathing is rendered difficult. A "wheeze" is heard in breathing, though there is no bronchitis or lung trouble present. The cause of this cramp is an irritation of the ring-muscle's nerve. It can be relieved by pressing cold cloths gently along the spine, from the back of the head to between the shoulders, taking care that the patient remains *generally warm* during the treatment, and attending to the feet and skin as directed below in this article. Sometimes the cause seems to lie in the air of the place where the sufferer resides. A change either to high ground or the seaside will often entirely remove asthma, especially in the young. In any such case a trial should be made of several places, if that be at all possible, and that place fixed upon where the asthma is least felt. At SEAMILL SANATORIUM (*see*) many asthmatic persons have found complete freedom from their trouble from the day of their arrival, and the treatment given has made this cure permanent.

Another cause of asthma is lack of power in the breathing muscles. In such a case the patient clings to a particular *attitude*, in which alone he can breathe. This is in most cases due to a lack of vitality in the root nerve which supply the breathing muscles.

An attack of this may often be relieved by rubbing, with the points of the fingers chiefly, gently yet firmly up and down each side of the spine, close to the bone. Even rubbing above the clothing will frequently relieve. The roots of the nerves supplying power to the breathing muscles lie just on each side of the spine, and this kind of rubbing stimulates these roots. It is not rubbing of the skin or backbone which is wanted, but such gentle treatment of the nerve roots on either side of the bone as makes them glow with genial warmth. This rubbing is of course better done on the surface of the skin. See that the patient is warm, then dip the fingers in cold water, and rub as directed. When the water makes the patient feel chilly or he tires of it, use fresh olive oil, warmed if necessary. Avoid all alcoholic drinks, which simply rob the nerves of the very power needed for cure. Temporary relief may be given by such drinks, but it is at the expense of lowered life and reduced chances of recovery.

A tablespoonful of *hot* water every five minutes is the best curative drink. It may be given for several hours if required. To give this rubbing treatment and drinking hot water fair play, however, attention must be paid most carefully to the *feet* and *skin* of the patient. The feet frequently are cold, and in bad cases swell, the skin at and above the swelling being pale and soft. In minor cases this state of the feet may be treated by rubbing with hot olive oil. In serious cases rubbing is to be alternated with bathing the feet in hot water, until the feet and limbs glow with heat. This may be done two or three times a day, for half an hour, or even an hour. It increases very greatly the vital power for breathing.

Again, the skin in bad cases of asthma becomes dry, hard, and a light brown substance forms on its surface. If the skin thus fails, severe work is thrown on the already overloaded lungs, and the breathing is much worse. Give the patient a night's pack in the SOAPY

BLANKET (*see*). If there is not strength to stand the entire treatment, keep in the blanket pack for a shorter time—one, two, or three hours. Not more than two nights of this treatment should be needed at a time. The soapy blanket greatly stimulates the skin, and opens all the closed pores, immensely relieving the lungs. If feet, skin, and back be treated as we have advised, even a very obstinate case of asthma should be cured. *See* APPENDIX; BATHING THE FEET; RUBBING; SOAP; SOAPY BLANKET.

Back Failures.—Often a severe pain in the toe, foot, ankle, or lower leg has its cause, not in anything wrong with the part which is painful, but in some failure of nerve in the patient's *back*. Blistering or other treatment of the painful part will often injure, and cannot do much, in any case, to cure. Pains even in the knee and groin sometimes have the same cause—in back failure. In other cases the symptoms are, weariness, stiffness, inability to stoop, or stand long without support, and pains in the stomach and thighs.

A little thought will enable any one to distinguish between pains due to back failure and those due to local causes. If there is no appearance of anything wrong at the part pained, then the evil is probably in the back. It is even a good rule to consider the pain at first as due to back failure rather than local causes, for by treatment of the back the local trouble, when that is present, is much helped and relieved.

In the case of pains in the arms or hands, the *upper* part of the back is indicated; in leg and foot troubles, the *lower* part. Neuralgic pains are almost always of this class.

In any case of this kind, heat may be applied to the spine, and rubbing with hot oil given to it, at its upper or lower part as required. If the heat and rubbing increase the pain, then cold applications may be used. Sometimes heat and cold may be needed alternately; but com-

mon sense must guide, and all irritation or chilling of the patient must be carefully avoided.

The best manner of applying cold to the spine is described in article on ANGINA PECTORIS. Towels are folded as there directed. The moist one (well wrung out) is placed next the spine, either over the part desired or the whole spine. The dry one is placed over this, and the patient lies down on his back on the top of them ; or, if he cannot lie, as sometimes happens, the towels are gently pressed with the hand against the spine until sufficient cooling has resulted. The patient should never be made to shiver. If he feels chilly, hot fomentations to the feet and legs, as described in article on ANGINA PECTORIS, may be applied.

Balance, Loss of.—Cases where loss of balance in walking and standing are due to ST. VITUS' DANCE will be treated under that head. Other cases, where loss of power in the motor nerves causes this unsteadiness, are treated of here. As these cases differ totally from St. Vitus' Dance in cause and treatment, it is well carefully to distinguish between them. In St. Vitus' Dance, then, notice that the patient cannot lie still. In case of simple loss of power, he staggers or falls only when moving, or trying to move. Probably also in the last case there are cold feet and clammy skin. For this, bathe the feet at bedtime in hot water, dry, and rub them with hot oil. Then apply to the back on going to bed a warm cloth, covered with soap lather (*see* LATHER), with dry towel above it. Do this each night for a week. When taking off the cloth, sponge the back with warm vinegar or weak acid (*see* ACETIC ACID), and rub with warm olive oil.

After a week of this treatment, apply each night for two or three days, a large BRAN POULTICE (*see*) across the loins for an hour at bedtime, with olive oil before and after. Above all, conscientiously let the patient *rest*. A good deal of lying in bed and on a sofa must be taken,

and good nourishment given (*see* ASSIMILATION, etc.). Some weeks of alternate treatment like this should effect a great improvement, if not a radical cure.

Balance of Action.—*See* ACTION, BALANCE OF.

Band, Flannel.—A piece of fine new flannel made to cover the whole back, and sewed under the usual underclothing, has a truly wonderful effect when worn in certain cases of illness. The same effect is not produced by doubling the flannels that are worn. What we have specially to call attention to is the fact that the piece is extra to all that which covers the rest of the body. The heat of the back, which is so very important from the nerve structure of the spinal system, is made to gather under a single ply of flannel, but much more quickly under two folds of the same material. When, therefore, there is anything like natural heat in the back, this piece of new flannel makes it gather quickly, and keeps it stimulating the parts to which it is confined. Then, if the front of the body is more thinly clad, it is very much the same as when a hot bag or a bran poultice is applied to the back, and a cold cloth in front. The effect is not so immediate, but in the course of time it gets to be even greater. We have never been able to see much come of "magnetic" or "electric" belts other than would result from wearing the woollen material they are covered with; but we have seen constantly all the good effects ascribed to the most costly appliances produced by a bit of new flannel. If there can be a good rubbing given with olive oil, and then the extra flannel put on, the effect is delightful. Again, when the skin has been cleansed effectually with the mixture for NIGHT SWEATS (*see*), put the flannel on. It causes a gathering of heat, which stimulates the spinal nerves, and produces good effects all over the body and limbs.

A broad band of extra new flannel round the lower half of the body is somewhat equivalent to fomentation

got in the armchair, or in the hot pack of the lower body. Those who are exposed, as coachmen are, and subject to lumbago and other troubles, will find a flannel band work wonders. This flannel band on the lower back is valuable in cases of rheumatism, sciatica, and various kidney troubles. On the upper back it is good for bronchitis and some forms of asthma.

It may be used in connection with the other forms of treatment given for these in separate articles. When linen underwear is worn, this band should be worn under that, next the skin.

Bandage, Four-ply Flannel.—The four-ply flannel bandage is simply what its name implies—a bandage of the shape and size to cover the parts treated, and at least four-ply thick. It is wrung out of cold water, and covered with a thick dry bandage while applied.

Bandaging.—*See* VEINS, SWOLLEN, etc.

Barley.—If this grain is well grown and thoroughly well cooked, it will be found to be one of the best foods for restoring an exhausted digestive system.

Take two or three handfuls of "pot" barley; boil this in water for two hours at least, thoroughly to burst the grain; then water and grain together are turned into a suitable dish, and placed, covered over, in the oven, where it may simmer for another two hours. When turned out, it may be salted to taste. After the four hours' cooking, the grain and water are a kind of barley pudding. A dessertspoonful of this every half-hour, from eight in the morning till eight at night, will help wonderfully a weak stomach, if taken as the *only diet*. This is what is meant when "barley pudding" is prescribed in these articles.

Bathing.—Cold baths, while greatly to be recommended to those who are strong, should not be taken by any one who does not feel invigorated by them. As

every one should, if possible, bathe daily, the following method is worth knowing, as it combines all the advantages of hot and cold bathing. The principle is the same as explained in COOLING IN HEATING. Sponge all over with hot water and wash with M'Clinton's soap; then sponge all over with cold water. No chilliness will then be felt. Very weak persons may use tepid instead of cold water. These baths taken every morning will greatly tend to prevent the person catching cold.

Cold bathing in water which is *hard* is a mistake, especially in bathing of infants. The skin under its influence becomes hard and dry. Warm bathing and M'Clinton's soap will remedy this.

Bathing the Feet.—This apparently simple treatment, if the best results are desired, must be gone about most carefully. A foot-bath for ten or twenty minutes, though a considerable help in many cases, is not at all sufficient. It must be given, in most cases, for forty minutes to give sensible relief. Some patients faint long before this time if the feet are placed in very hot water from the beginning. To avoid this faintness, proceed as follows: Get a vessel that will hold the feet easily, and be deep enough to reach nearly up to the knees. Put water in this one inch deep, and at blood heat—that is, just to feel warm to an ordinary hand. Set the feet to be bathed in this, and have plenty of hot water at hand. Let the patient be comfortably covered and seated, and wait two minutes or so. Add then a little hotter water, and every two minutes add a little more water, hotter every time, gradually increasing the quantity and temperature of the water. In half an hour a good strong heat and large deep bath will be reached, and in only a very few cases will there be any faintness. If the heat is raised too fast, give a little cold water to drink, and proceed more slowly. This is in cases where simple stimulus to vital action is required.

If the bathing be for sores, or disease of joints, the sores should be dressed first with cold cream or vaseline, or covered with a cloth dipped in olive oil. If the skin becomes irritated from prolonged bathing, cover before bathing with a cloth dipped in weak vinegar or very weak ACETIC ACID (*see*). If the patient is too weak for bathing, a fomentation may be applied as described in article on ANGINA PECTORIS, only extending, however, over the knees. Such fomentation may also be used whenever cold cloths applied to a diseased or inflamed part tend to cause a chill. It will quite prevent this.

Baths for Head.—In many cases of indigestion and brain exhaustion head-baths are of great value. School teachers, business men, and many others suffering from these, will find a daily head-bath half an hour before dinner of the greatest value. This treatment should be given, however, only to those who are vigorous enough to bear it. Some are too exhausted, and for these other methods must be employed. The head-bath is given by rubbing the whole head well with soap lather (*see* LATHER ; SOAP); then wash off and treat with cold water poured over the head for a short time—a few seconds only ; then rub vigorously with a dry, warm towel till the head glows with friction. In the case of ladies, the hair may be thrown over the front of the head while the back of the head is treated thus, and then thrown back while the front of the head is treated also, the bulk of the hair being thus kept dry.

Bedsores.—There are cases in which the outer skin has been taken off by long lying, or wearing wet compresses for a long time. A large part of the body is reduced, as some would say, to "red flesh"—in reality it is reduced to inner skin deprived of its outer layer. We have taken a few handfuls of finely wrought soap lather (*see* LATHER ; SOAP), and spread them as lightly as possible over this fiery surface. There was an instant change from

severe distress to perfect comfort, and healing began at once. This treatment may be applied to any simple abrasions of the skin. Bedsores are not likely to occur if the skin is sponged daily with water and this mild soap, and rubbed with Rectified Spirit of Wine, to which a small piece of camphor has been added.

Beef Tea.—It is well to bear in mind that there is scarcely any nourishment even in home-made beef juice (the best form of any extract of meat).

Home-made beef juice is prepared by scraping the meat into shreds, placing in a jar, and leaving the water to soak into the meat for about half-an-hour. Then place in a saucepan on the fire for an hour, during which time it must not boil. After being then brought to the boil, it should be removed immediately, and the lump of meat removed.

Some idea may be obtained of the relatively small amount of nourishment even in this form of extract when it is remembered that the thin flaky matter which sinks to the bottom in the bowl is practically the only nutritive portion in the dish.

All extracts and such-like preparations are inferior to home-made beef tea in value. We do not deny, then, the value of beef extracts as stimulants in certain diseased conditions, but we do not recognise them as a useful food. Further, the stimulating effect upon the heart is largely due to the hot water they are made with (*see* BONE DISEASED).

Bile, Black.—For this take two tablespoonfuls of hot water every five minutes for six hours per day. A good many cases, some even given up by the doctors, have been cured by this simple, yet efficient means.

Bile on the Stomach.—Take half a teacupful of hot water every ten minutes for ten hours. Next day take the same every twenty minutes for a like period. The third day the same every hour. For ten days after take

the same before each meal. We have seen a case of liver complaint of more than twenty years' standing cured thus. See also that the feet and legs are rendered healthful, and kept so. If cold and clammy, they should be bathed in hot water for five minutes or so, dried, and rubbed with warm olive oil.

Care must be taken also to give a simple diet. Oatmeal jelly, wheaten meal porridge, barley pudding (*see* BARLEY), and such foods, should form the staple nourishment. Avoid eggs, butter, cream, and beef. *See also* SEA-SICKNESS.

Biscuits and Water.—The biscuits referred to are manufactured in Saltcoats.* They are made from the purest whole wheaten flour. The late Mr. Bryden, of the Saltcoats Home, used them along with hot water as sole diet in many serious digestive troubles, with marvellous success. Where no food will lie on the stomach, one small, or half a large, biscuit is to be taken three times a day, as a meal, and at meal-times. This will prove amply sufficient to maintain the system in such a case, until the stomach gains power for more. In the case of SORES and ABSCESSES (*see*), such a diet of biscuits and water provides pure blood, and makes healing by other treatment very much easier. We have known limbs saved from amputation largely by such diet. It will suit equally well the delicate young lady and the strong labourer. Too much of ordinary food goes to increase ulceration and nourish disease. The Saltcoats biscuit provides nothing for these ends, and is of immense value as an aid to cure. One great advantage of this diet is that it is a *dry* one, and the biscuits *must* be thoroughly chewed to enable them to be swallowed at all. The saliva is thereby thoroughly mixed with the food, which is all-important to make it digestible. These biscuits are also so plain as not to tempt the patient to eat more than he can digest, which is the great danger

*By Mr. R. Black, baker.

in sickness. The slops of gruel and cornflour so often given are never chewed at all, and often do nothing but harm. Such starchy foods really require to be more thoroughly mixed with saliva than any other food, as unless, by action of the saliva, the starch is converted into sugar it cannot be assimilated in the stomach.

Bleeding.—In any case of this pack the feet and legs as directed in LUNGS, BLEEDING FROM, and press cold cloths to the place the blood comes from, stomach, womb (*see* MISCARRIAGE), or lungs. If it comes from the nose, apply the cold cloths to the head and back of the neck.

Blisters.—The destruction of the skin over any painful part, by means of blisters, is to be always avoided if possible (*see* BURNS, KNEE, PLEURISY, etc.)

Blood.—A most common trouble is ANÆMIA, a lack of good red blood, showing itself in a waxy paleness and whiteness of lips, often accompanied by exhaustion and great fatigue. To remedy this, first secure a supply of pure water, of which 80 per cent. of the blood is made up. Give this warm in dessertspoonfuls every five minutes. Give two tablespoonfuls, or perhaps only one, of very light food, or milk and boiling water half and half, every half-hour. This may be done in smaller portions every fifteen minutes, or in larger quantities every hour or two hours, according to the state of the digestion. Fruit is a valuable means of quenching the anæmia thirst, besides being very beneficial for the blood. Green vegetables and salads are also most valuable (*see* VEGETABLES ; ASSIMILATION ; DIET ; DIGESTION). As much fresh air as possible is also to be breathed by the patient. Either much time must be spent in the open air, or, if strength forbid this, the room must be thoroughly ventilated. Close air is the enemy of good blood. We know of many cases cured by this simple regimen. Care must also be taken to increase the patient's vitality by various means. If *thoroughly good*

medical advice can be obtained, it should be taken (*see* AIR AND APPETITE ; BALANCE, LOSS OF, etc.)

Blood Poisoning.—(*See* BLOOD, PURIFYING ; SORES).

Blood, Purifying.—Fever arising from bad state of the blood may be treated by careful cooling of the spine and head, with towels *well wrung* out of cold water, frequently changed (*see* FEVER). The pulse in one case so treated was reduced from 130 to 96 by a few applications. If a sore exists, treat it as in article SORES. If an eruption in the skin breaks out, cover the surface at night with soap lather (*see* LATHER ; SOAP). Wipe that off with weak ACETIC ACID (*see*) in the morning, and the skin will come right. Let the diet be simple and cooling (*see* ABSCESS ; ASSIMILATION ; SKIN ; SORES ; APPENDIX, etc.).

Blood, Supply of.—To supply good blood in cases where it is lacking, either from indigestion or low vitality, nothing is better than milk, diluted with an equal quantity of *boiling* water. It may be less or more diluted, as the patient's power of digestion is greater or less, but in all cases half and half can be tried first. This forms a natural blood supply. Claret, switched egg and brandy, are to be carefully avoided. *Boiling* water amalgamates with the milk, and care therefore must be taken to see that it is really boiling. Give a teacupful of this every two hours. If the patient is very weak, this may be the only diet. But often he will be going about work or business, and yet needing fresh, good blood supply. Then the cupful may be taken every two hours, in addition to the usual meals. Experience will soon show how this may be done. But two hours after a meal, the milk and water may be given.

Boils.—The following treatment will be found effective to heal less severe forms of boils, by soothing the whole fevered system of nerves, and stimulating the skin in its getting rid of waste material.

Begin, then, by thoroughly soaping the head (*see* HEAD, SOAPING). Go to the back next, and soap similarly. The same process may, if desired, be carried over the whole body to the very tips of the fingers and toes. In a delicate case, do this in portions so as not to run any risk of exposing the patient too much.

Lay on the boil, after the soaping, and while the patient is under its soothing influence, a large piece of thickly folded flannel, or a small sponge, squeezed out of water as hot as the patient can bear. Continue this, with frequent re-heating of the application for a quarter-of-an-hour, then allow the patient to rest.

When you have soaped a patient as we have described, say twice, it is necessary to wash off the particles that may remain on the skin with white vinegar or weak acetic acid. Then, if you have overcooled with the soap and acid, it will be well to rub over with warm oil. By these simple methods of treatment you will banish all tendency to boils. You will change great suffering into comparative comfort, not only without expenditure of strength, but in a way in which you add vigour to the whole frame. One very great advantage of this treatment is that you do not need to move the patient in any distressing way. If you have only tact and gentleness of touch, you can do all that we have described without causing one moment's distress. The severe form of boil known as *Carbuncle* is very dangerous, and in such cases good surgical aid is necessary, in addition to above treatment (*see* DIET).

Bone, Diseased.—Diseased bone is not incurable. Bone is indeed constantly being replaced as it disappears in the ordinary waste of the body. Defective vitality in any part may cause an accumulation of bad material, which forms the basis of bone disease.

To cut off a diseased foot or ankle is easy, and soon done. To cure it, may take a long time and much

patience, but is worth a great deal. We know large numbers of limbs that are sound and good now, that were doomed once to be amputated, but which we were able to rescue in time.

Moreover, a very short time of well-regulated fomentation improves the general health, and prevents the diseased material spreading from the foot or ankle through the body.

Take, then, a case in which the ankle bone has first become painful, perhaps without any perceptible cause, or it may be as the result of an injury to the part. It then swells and becomes inflamed. At this stage two or three FOMENTATIONS (*see*) well applied may very likely cure it entirely. But if neglected, or leeched, blistered, and the skin spoiled with iodine, what is called disease of the bone may set in, accompanied with discharge of matter at one or more places on the ankle. This discharge, where it is evidently lodging in the limb, may be assisted to escape by careful lancing by a good surgeon. For such a case, fomentation of as much of the limb as possible is the treatment. Let a bath be procured, in which the limb may be immersed in hot water as deeply as possible, even up to the very thigh. Let the water at first be comfortably warm. Increase its temperature gradually until as hot as can be borne without pain. Keep the limb in this bath for an hour, or for such shorter period as the patient may be able to bear it. Gently dry, and rub all over with warm olive oil. Wipe this gently off, and cover the limb with clothing. Then syringe any sores with weak acid (*see* ACETIC ACID; WOUNDS), and dress with bandage (*see* ANKLE, TWISTED). Do this twice each day, and persevere.

If it cannot well be bathed, let it be fomented by a large piece of flannel soaked with boiling water, and placed round the diseased part. We have seen a wasting bone healed entirely in a few weeks by this means. We have seen a man with the bones of both his legs splintering

off and coming through the skin perfectly healed in a few months. It stands to reason that it should be so. The bathing in his case, like the fomenting in others, were so effectually done that the bones themselves were heated, and strong healing action set in at once. We saw lately a piece of dead bone above four inches long come out of a young man's arm as the result of nothing else but fomentation. The arm was soon as whole and as useful as could be desired, though it had been to all appearance only fit to be taken off at the elbow. The steady supply of moist heat does wonders in this way.

We have seen some most remarkable specimens of what was erroneously thought sufficient fomentation. One was a case of diseased thigh-bone. A bit of old flannel, about a quarter of a yard square, had been wrung out of water slightly tepid and laid on the skin, covered by a little cloth scarcely equal in size. The application would not have conveyed activity to the skin on which it was laid, though it required to convey it to the heart of a large mass of bone. The helpless complaint of the operator was that it did no good. How in the world could it do good? Not less than six or seven or even eight yards of a blanket are required. That is to be folded and rolled up so that a good quantity of boiling water may be poured first into one end of it and then into the other. It has to be squeezed and kneaded till the heated water and steam are fairly soaking the inside of the blanket. When this is opened up, it is far too hot to put to the skin, but a double flannel or strong towel may be put on first, so that the heat shall go gradually through to the body, and by-and-by into the bone. This may be done at least once a day—if agreeable, it may be done twice. But it must be so well done that the heat shall effect the bone, or you cannot look for any result of importance.

If under the bathing the skin becomes irritated, as it will often do, cover it with cloths soaked in *weak* vinegar till

the bathing is over. If the skin suffers from the fomentation, do the same thing, and if this does not cure, dress it, before putting on the fomentation flannels, with SOAP (*see*) lather as if for shaving, spread like butter on a cloth, and made to shelter the skin from irritation till the fomenting is done. This is of great importance in many cases ; the skin is often so sensitive that it cannot well be bathed without being protected.

Preparing Blanket for Fomentation.

In the case of hip-joint disease, the ARMCHAIR FOMENTATION (*see*) is the best form of fomenting. For other parts, common sense will guide how to produce an extensive and thorough heating of the diseased part and its neighbourhood by some similar means (*see* BATHING THE FEET ; PAINS, etc.). It is only heating the failed tissues,

only keeping on such heating, and all the elements of perfect cure are supplied. Even limbs which have shrunk and become shorter, grow out to their natural size under this patient heating.

Get "steel drops" and all such-like sent down the sewer. The rats may have them if they are disposed. Give wheaten or oatmeal porridge, bread or Saltcoats biscuits, with good buttermilk, and the poor creature, half dead with poisonous "drops," begins ere long to have red on his lips and on his cheeks, some fresh vigour in his muscles, and healthy bone in the course of formation, where bone was only wasting before. How is this explained? On the simple principle that the bodily system can turn wheaten meal into all the elements wanted for good bodily health. Beef tea, soups, "fine things" of all descriptions, never on earth gave human beings solid strength, but in myriads of cases they have been successfully employed to take it away. Above all, they fail to give healthy bone.

Get the patient to take wheaten or oaten meal porridge twice a day at least. We are not so stern as some in forbidding all else, though in this we may fall short; but by all means let eating and drinking be considered in the light of what we have been writing (*see* FOOD IN HEALTH).

Good air is important in this, as in all cases of ill-health.

Much depends, in this treatment, on cheerfulness of mind. Let the patient feel that he is going to be cured. Avoid opium, tobacco, alcoholic drinks, and all worry. This will actually increase the vital exchange in the body and very much help the cure.

Bone, Soft.—Often, in the young, the bones are so soft that they bend more or less, and the beginning of a distressing deformity appears.

In such a case plaster jackets and steel bands are of little use, and often very painful. It is better to use bandages, applied so as to support where that is necessary. Also

avoid all long sitting, such as is found at school. It is best sometimes not to permit the child to walk at all. Better far to lose two years of schooling than to be deformed for life. Parents should see to it, with all weakly children, that school does not become a means of trouble. Continuous education is not nearly so important as is sometimes supposed.

For positive treatment, let the parts be well and carefully rubbed (*see* MASSAGE) every day with olive oil, in such a way as to direct a flow of blood to the feeble bone. It must largely be left to the healer's common sense how this is to be done, but a little thought will show how. At many Hydropathic Establishments it may be learned.

This careful rubbing, with good diet and proper bandaging, will gradually effect a cure in most cases. But here, as elsewhere, patience must rule. Plenty of good porridge and milk, with abundance of fresh air, work wonders in this disease.

Bowels, Glands of.—Symptoms of glandular trouble in the bowels are—weariness and pallor, lack of appetite, softness and shrinking of limbs, with swelling of the belly. In its earlier stages, before consumption sets in, this trouble may be perfectly cured. We have seen even apparently hopeless cases recover under proper treatment. In its essence the trouble is a failure of power in the nervous centres upon which health of the bowels depends. To supply this needed power, take a small bag of cotton cloth, like a little pillow-slip, of just the size to cover the patient's whole back. Fill this with bran, prepared as for poultice (*see* BRAN POULTICE). Oil the back before applying this, and place, if needed, four ply or so of cloth on the back to moderate the heat to the skin. After half-an-hour, if the patient feels desirous, renew for another hour; do this each day at bedtime for a week at least. Rub the body all over with warm olive oil when this is taken off; then place a bandage with only a gentle tightness in such a way as just to help the relaxed bowels, but only just so

much—not by any means to try and force them into what might be thought proper dimensions. Give a teaspoonful of liquorice mixture (*see* CONSTIPATION) thrice a day before meals in a little hot water. Feed on wheaten porridge and generally light diet, being careful to regulate it so as to make the bowels work easily and naturally. If not too bad a case, this treatment will soon tell favourably. ENEMAS (*see*) of either cold or warm water, as required, will also greatly help.

Bowels, Inflammation of.—This (called medically Peritonitis) is an inflammation of the membrane covering the bowels. It results from chill or strain, and sometimes, in the case of child-birth, from dirt introduced into the parts by handling with unwashed hands. In such cases, the utmost care must be taken to ensure cleanliness, which will secure against one fertile cause of the disease. The hands should be always fresh and clean, and all cloths, etc., should be either most carefully washed or burnt. Where the trouble arises from strain, or chill, these lower the vitality, and the membrane becomes gorged with blood at fever heat. To regulate this heat, then, and free the membrane from the blood which over-fills it, is to lead to a cure. Rub the back with warm olive oil, place on it a large BRAN POULTICE (*see*), or an india-rubber bag of hot water covered with *moist* flannel; this must in either case be large enough to cover the entire lower back. Anything may be used, if these cannot be had, which will powerfully stimulate the back with moist heat. Wring a small thin towel out of cold water, and place it over the bowels. At first this must be very gently laid on. After a little, and when several times freshly applied, this cold cloth may be *very gently* pressed all over the bowels. Relief will almost certainly come ere this has been done for an hour. Then a rest may be given for two hours, and after that a large fomentation applied to feet and legs (*see* FOMENTATION). While this is on,

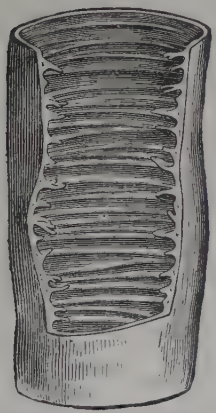
the cold cloths may be changed over the bowels again, and over the chest as well. After an hour of this, great relief should be felt. If there is great thirst a small bit of ice may be sucked, or a few drops of vinegar in water may be taken; but the outside cooling will probably render this unnecessary. Avoid all alcoholic drinks.

Shivering and a feeling of cold is often the earliest symptom, and as it is of immense importance that warming measures should be promptly applied. Hot bricks, or bottles, placed merely to the soles of the feet, are but poor helps: it would be vastly better to pack the feet and legs in a hot blanket fomentation at once, and, if pain at all shows itself, to apply a large fomentation to the lower part of the back. The sooner this is done the better; besides, there is the consolation that the treatment can never do any harm even if applied in a case in which there has occured a harmless chill. The dread which some medical men have of cold applications is wonderful, but we know that the front-rank men have no such fear. When care is taken to have the hot application on first, there is, and can be, no possible danger in any case in cooling down the burning circulation. One or two applications have sufficed in many cases we have seen.

Bowels, Lax.—A teaspoonful of lemon juice (freshly expressed), along with hot water and sugar, will often relieve where the bowels are acting excessively. For infants in diarrhœa a mixture of honey and lemon juice is an excellent cure, and has been most successful in our experience. Avoid brandy and alcohol generally.

Bowels, Locking of.—Sometimes when one part of the bowels is much more active than another, it passes into that other, and they become *locked*, like a stocking half turned inside out. This causes dreadful pain, and if not soon relieved is fatal. Purgatives are of no use, and usually make matters worse. A surgical operation in

very skilful hands will relieve, and must be quickly performed when necessary.



Interior of small intestine.

In cases in which the one part of the bowels has not yet gone far into the other, nothing more is required than a cold cloth gently pressed over the parts. We have seen relief set in on the fifth or sixth change of such a cloth, when nothing else was used whatever. When a hot bag, or bran poultice, has been put on the back, and cold cloths persistently changed over the bowels, the whole matter has been put to rights, and natural motion of the bowels has been had within an hour after the applications have been begun.

There is, however, a stronger measure than merely heating the back and cooling the front in this way. The patient may be put at once into a sitting bath or small tub, and a panful of cold water poured or dashed on to the bowels; they then contract so powerfully, and shorten themselves so much, that all invagination, as it is called, is made to cease instantly. We should be disposed to try the mildest method in the first instance, unless the case is one in which the lock in the bowels had just taken place. Then it might be well to dash the pailful of water on so as to put all right at once, and afterwards simply to apply such remedies as would tend to prevent a recurrence of the evil.

It is, however, usually the case that the distress has lasted some time before an opportunity of doing anything occurs, inflammation, more or less, has set in, weeks may have passed, and blundering treatment may have done great mischief. Then it is safe to use the heat at the back, and frequently changed cold cloths in front, so as to reduce

the inflammation, and contract the bowels more slowly, so as to remove the obstruction. When these have been used for some time, if the obstruction is not removed it will be well to resort to the stronger measures. Nothing is more beautifully simple than the ordinary action of the bowels. The healthful movement is like that by which an earth-worm moves along the ground: so long as the tube is thus moving its contents onward, by contraction and expansion, no part can pass inside or outside that which is before it; but when one part loses nervous tension, and expands without contracting quickly enough, the part behind it tends to worm itself into it, and a "knot," as it is sometimes called, is formed. No possible instrument can reach it except by cutting the body outright, but the action of cold is so powerful in contracting the tube that the "loop," as it is also called, is drawn out, and the right state of things is produced. It is important to remark that there are glands near the lower bowel that swell and form tumours. The cold applications reduce these very speedily to their usual size, and if their swelling is an obstruction, it is soon removed. But it is the lock in the tube itself that is the real malady of which so many die, and with which so many more narrowly escape.

The trouble is best avoided by attention to the regular action of the bowels. It arises from great irregularity in that action.

Bowels, Reversed.—*See* BOWELS, LOCKING OF, above.

Brain Exercise.—Proper exercise for the brain is most important. But this is not to be found in that kind of severe mental labour which is sometimes mistaken for it. Children at play have genuine brain exercise. So has a man at what is called a "hobby," such as photography, golf, or cycling. The child at school, the man in his office, are not at exercise, but at wearing work. This distinction is most important. Exercise, again, is not found in careless dreaming, but in some form of "play"

which calls for steady, but almost unconscious, and altogether enjoyable thinking. Books sometimes furnish this, when they lift the mind as far as possible out of its usual track, and produce only pleasant thoughts. Tragedies, novels which end miserably, or which are pessimistic, should all be avoided. Perhaps some easy science or art is the best exercise of all, when the brain is suffering from overstrain. But taste will guide in this. The great matter is to have pleasurable, easy, and natural employment for the brain. This and not work is strengthening "exercise," whether in child or man. So far as we can we should see that the weary get it. For he who procures this for his fellow works immense good.

We have seen, for instance, a student attacked with dysentry while in the hardest part of the session at the university. His whole system became prostrate, and muscular activity to a very small degree would have killed him ; so would the continued mental toil necessary to go on with his studies. Yet his brain was in need of exercise almost from the first appearance of his disease. He must have this or be miserable, and not likely soon to recover. An intensely interesting book fell into his hands, altogether away from his track of toil. He read day after day at this book. This was his "exercise"—that is, it was the activity of that one only part of his physical system which needed such exercise for the time. That exercise allowed all the other organs to recuperate.

Brain, Inflammation of.—This arises often from overschooling of young boys and girls. Care should ever be taken to avoid this. Obstinate constipation in the bowels, chills and exposure, are also fruitful sources. Much worry and anxiety also bring on this serious illness. All sometimes combine to produce a bad case. Pain in the head sets in, followed by convulsive attacks ; yet the trouble may be cured in many cases with comparative ease. Leeches, opium, and blistering are to be avoided as

most injurious. For treatment it is well to begin at the feet; if these are clammy and cold, wrap in hot fomentation up over the knees (*see* FOMENTATION). Proceed to give a pretty warm injection of water into the lower bowel (*see* ENEMAS). This should be repeated several times, allowing it to pass off each time. If this increases the pain, try an injection of cold water. This treatment of feet and bowels is most important, and should never be neglected; it renders the treatment of the head tenfold more effective. Cold cloths may now be gently pressed for some time over the head. If the pulse is violent and feverish, let several towels be well wrung out of cold or even iced water, fold one so as to cover the entire head and back of the neck, and have the others ready, similarly folded. Press the first on gently, especially at the back of the head, so that the cooling cloth covers the head all over and soothes the violently heated brain. As soon as one towel grows warm, take a fresh cold one. Relief should come in an hour at least, but longer may be required. During the cooling see that the heat of the fomentation on the legs is well kept up; change if necessary. When the more painful symptoms abate, oil the lower part of the back, and place on it a bran poultice (as recommended in BOWELS, INFLAMMATION OF). This will go far to prevent any relapse. If the symptoms recur, use the treatment again. *See* BROW, WEARY; EYES, FAILING SIGHT. *See also*, for other brain troubles: RESTLESSNESS; SLEEPLESSNESS.

Brain Rest.—The need for this is often indicated by irritability of temper. This coming on is generally a warning that a period of rest must be taken. An overheated brow is also another indication. If this shows itself in a child during or after school, together with listlessness and excitability, all idea of lessons should at once be laid aside for a time. It is nothing less than cruelty to work an overheated brain in such a case. Let the

child go free from school till all the head trouble is removed. Also let the head be soaped (*see* HEAD, SOAPING).

Sometimes pain in the head sets in from overwork. Even in the young, fainting may show itself. Rest is essential, and will prove a perfect cure, together with a little brain exercise of the kind described in article BRAIN EXERCISE, always avoiding fatigue. Let all readers remember that it is better to lose six months in rest than become permanently incapable, therefore let old and young take rest in time.

Bran Poultice.—Get a sufficient quantity of good bran in an ordinary washhand basin. *Heat* the basin before beginning operations. Have also a boiling kettle at hand. Pour the boiling water by little and little into the bran, and mix and stir it up until it is all a moist mass, but not *wet*. The thing is to avoid putting in more water than the bran can easily absorb and hold. Then have ready a flannel bag of the size and shape required for the poultice. Fill this with the bran, and it is ready. The skin to which it is applied should first be oiled with olive oil. The poultice may be fastened on with flannel bands. In any case it must lie tightly on the skin. The patient must lie on it, if it be applied to the back. One or two tablespoonfuls of mustard may be added if great power is required, not otherwise.

Instead of this poultice, an india-rubber bag full of hot water may be used, with two or three ply of moist flannel between it and the skin. Our only reason for recommending bran is that many could not afford the india-rubber bag.

Bread, Wheaten.—In some cases the bran in whole wheaten bread and Saltcoats biscuits is found to irritate the stomach and bowels. As diet for those able to digest the bran, nothing is better. Where it cannot be digested, ordinary bakers' bread boiled in water to soft pap is found to make a good substitute. This must not be boiled with

milk unless where there is diarrhœa to be cured, as milk tends to produce bile and costiveness. Oatmeal jelly (*see* FOOD IN ILLNESS) is also a good substitute for biscuits and wheaten bread.

Often the water with which bread is baked causes it to be difficult of digestion. Hard water is bad for this. For an invalid, bread baked with distilled water, or pure rain water, is often a means of great comfort and help. A slight admixture of pure CANE SYRUP (*see*) or liquorice juice in the water will tend to prevent bile and costiveness. A sufficient action of the bowels is of great importance for where good nutrition is desired.

Bread, especially when fresh, is made much more digestible by slowly toasting it in the oven till it is a golden brown throughout. It is then known as "zwei-bach" (twice baked). When eaten dry, it requires considerable mastication, and for that reason is much better than soft bread. It can be also broken up and eaten with hot milk and sugar.

Breast with Corded Muscles.—Often a slight hardness shows itself in a woman's breast, when the muscular tissue becomes what is called "corded." It is well, first of all, in all cases of breast trouble to avoid alarming the patient. Great anxiety is often endured through fear of cancer when there is no need. A "corded" breast may usually quite easily be cured, and the patient should be made perfectly easy in mind about it.

Take a good lather of soap (*see* LATHER ; SOAP). Apply this night and morning, gently lathering the breast for some time. After this, each time, rub the back well with hot olive oil, so as to produce a thorough glow of heat all over it. Sometimes the swelling will disperse under this treatment. It may, however, grow larger and show a tendency to break. In this case treat as in next article.

We shall also probably find, on examining, that the skin was failing to do its part well. If rubbed with Cayenne

lotion the clean, healthy skin will send off much more waste than was allowed to pass through it before.

Breast, Swelling in.—A blow on the breast, or the drain of nursing a child, along with a chill, often produces swelling, sometimes hard and painful. This, if left uncured, may even develop into an ABSCESS (*see*). As it sometimes arises from dirt being left on the nipples, all nursing mothers should be particular about cleanliness, which itself prevents many ills.

For cure, bathe the feet in hot water (*see* BATHING FEET), rub them over with warm olive oil, and wear good cotton stockings if in bed. If going about, put a pair of woollen stockings over the cotton ones. Rub the back as recommended above, using first a little hot vinegar, then the oil. The feet bathing may be every three days, and rubbing the same. If the swelling does not yield to this, place the patient comfortably in bed. Put a good-sized basin of hot water, which has been boiled and allowed to cool so far, tightly under the breast, so that it may be bathed with a sponge. Do not use too hot water, but just comfortably hot. Keep up fresh supplies, and bathe for an hour if patient can bear it. If she becomes fatigued, lay her down to rest for fifteen minutes or so, and then continue treatment. No poulticing is needed when this is well done. A thorough heating of the whole breast is what is wanted ; rub gently with olive oil, and cover warmly after bathing (*see* CANCER).

Breast, Sore Nipples on.—Take a little warm vinegar or weak acid (*see* ACETIC ACID). Bathe the sore nipple with this, *avoiding pain*, for about ten minutes. Every two minutes dry, and anoint gently with warm olive oil. We have seen *one application* cure a bad nipple ; but apply twice daily as long as needed.

Breath and Blood.—Often difficulty of breathing, especially in close air, mistaken even for asthma, is due simply to the quality of blood supplied to the lungs.

Sometimes giving up the use of sugar effects a cure, for sugar produces an excess of carbon in the blood, which requires an excess of oxygen in the lungs to purify it. Thus breathing is difficult, especially where oxygen is deficient in the air breathed. Sometimes the lungs are not strong enough to stand the necessary fresh air required in such cases, or other troubles may prevent a delicate person from exposing themselves. Then it is of importance so to regulate the diet that less oxygen will do all that is needed in the lungs. "Rich" food, much fatty matter, sugar, and all sweets and sweetened things, are to be avoided. If this be done, the need for much oxygen disappears, and the patient will have no difficulty of breathing in suitably ventilated places.

But the best treatment is hot oil rubbing along the spine, over the stomach, and even down the limbs to the ankles. An hour of this every day will work wonders. Or a large BRAN POULTICE (*see*) may be laid across the back for an hour twice a day. Cultivate also all cheerful thoughts, and banish sad ones as far as possible. Sad thoughts greatly diminish nerve power.

Breath, and the Heart.—Stout people are usually more or less "scant of breath." Accumulations of fatty material, or changing of muscle into fat, cause this, especially if about the chest and heart. To reduce the fat, and grow healthy muscle instead, will perfectly cure the difficulty of breath. Moderate open-air exercise and simple food, such as Saltcoats biscuits, oatmeal jelly, and barley puddings will largely help this. Avoid also all alcoholic liquors, the use of which is often *the sole cause* of the trouble. Keep the skin active (*see* SKIN).

The hot FOMENTATION (*see*) to feet and legs is a truly powerful remedy for all lack of force in the system, especially if followed by the massage treatment described in MASSAGE (*see*).

Breath, Hot.—This may be felt either because the breath is actually hot, or because the membranes of the tongue and mouth are unusually tender, and *feel* the breath hot in consequence when it is not really so. This latter case is usually accompanied by a sore tongue. To heal the tongue, it must be soaked freely with vinegar or weak ACETIC ACID (*see*), so diluted as to give only a very slight feeling of smarting after even prolonged application. Apply it with a good camel's hair brush, and brush with a little fine almond or olive oil after the acid. The mouth may be rinsed with the acid, but brushing is best.

But where real heat is found in the breath, it arises from an overheated state of the body internally. This frequently arises from failure in the stomach to digest properly. If the hot breath arises from this, small drinks of hot water, frequently taken, will usually cure it. A warm bran poultice, placed on the back at bedtime opposite the stomach, will prove a more powerful remedy in addition to the hot water. More powerful effect still will be found in such stimulus to the skin as washing it all over twice a week with vinegar or weak acetic acid. On other days let the patient be rubbed over with good olive oil, mixed with enough CAYENNE "TEA" (*see*) to cause a slight burning sensation. Let this also be done twice a week, and twice a week also wash all over with M'Clinton's soap and hot water. A plain diet of course, should be observed (*see* DIGESTION; DYSPEPSIA; FOOD; TEETH, etc.).

Breath, and Muscles.—Sometimes difficulty of breathing is due, not to anything wrong with lungs or windpipe, but to failure in the diaphragm (or large muscular "floor" of the chest), and the other chest muscles, which work the lungs. A feeling of sinking and weakness round the waist indicates in such a case diaphragm failure. Gentle heat at the small of the back, and olive oil rubbing, form treatment for this. For other

chest muscles, give a warm washing each night with SOAP (*see*) over the body, and rub, especially the back and chest, with hot olive oil. You soon bring the muscles into good trim.

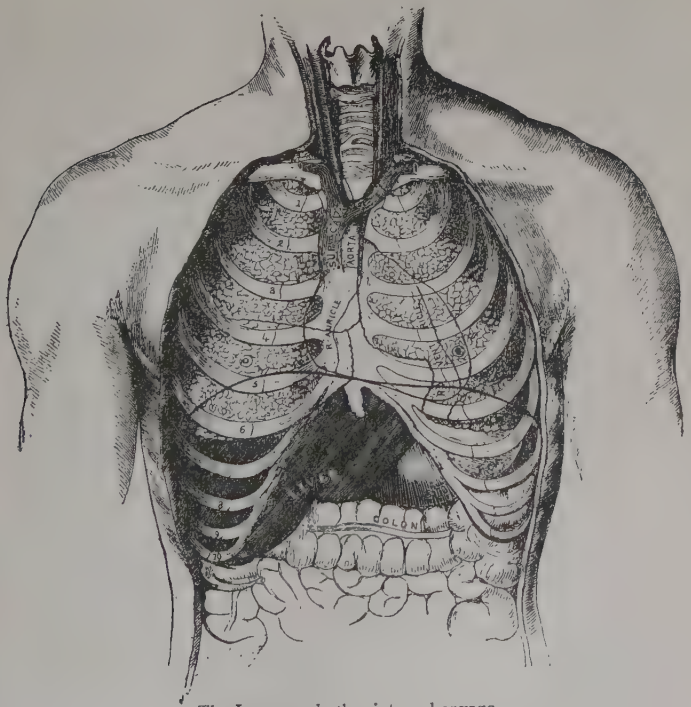
Breath, and Nerve.—Difficult breathing, especially in ascending a hill, is often due simply to the lack of the nerve power by which the breathing muscles work. A teacupful of hot water half-an-hour before each meal, by helping digestion, will often remove the difficulty. Rub each evening along the spinal cord with hot olive oil.

Breath, and the Skin.—The organs of breathing remove much waste from the system, but the skin also removes a very large part. If either fails, the other has more work thrown upon it, as we see in the severe "night sweats" which accompany chest and lung failure. In such cases, rub with CAYENNE LOTION (*see* and NIGHT SWEATS). Avoid the use of hard water in washing and bathing, especially with infants.

Cold baths for the weakly, chills, damp beds, and such things, cause rheumatism and colds by stopping the proper discharge of waste by the skin. After such chill, or cold in damp bed, a hot wash and good hot oil rubbing will avert all evil. This may not always be available; but, if it can be got at all, should be given as soon as possible. The use of the soapy blanket is of the utmost value in severe cases (*see* SOAPY BLANKET). Strict cleanliness of person and underwear should be observed. The AIR BATH (*see*) will also give tone to the skin (*see* SKIN and UNDERWEAR).

Breathing, and Bronchia.—The *bronchia* are the branching small tubes which lead from the windpipe to all parts of the lungs. Two different states of these often pass as bronchitis. In one of these the tubes are swelled, congested, and full of fiery heat. The whole body is also fevered, and breathing is difficult, with cough. This

is true BRONCHITIS (*see*). But often, with difficult breathing and irritating cough, there is no heat and fever. In this case bronchitis treatment gives no relief. This is, indeed, only an irritated state of the lining of the tubes, and far from dangerous. A change of climate to a drier



The Lungs and other internal organs.

atmosphere will often entirely cure it. Often also a time spent in a room, where the air is kept dry but fresh, and at one steady temperature of about 60 deg., will cure. Our chief purpose in mentioning it, however, is that this comparatively slight trouble may not be mistaken for true bronchitis.

Breathing, Correct Method of.—The capacity of an ordinary pair of lungs is about 250 cubic inches. In ordinary breathing, however, we only take in from 20 to 30 cubic inches. Hence the necessity for practising correct deep breathing.

Correct breathing requires cultivation and effort at first, afterwards it will become unconscious. The head should be thrown back, the shoulders squared, and a slow deep breath gradually inspired through the nose till the lungs are filled throughout with air. The expiration should be just as gradual with relaxation of every muscle. It is most important that the *lower* part of the chest should first be filled by depressing the diaphragm (the muscular floor of the lungs). Some practise is needed before this habit is acquired, but it is well worth cultivating. Place the hands on the sides of the abdomen while inspiring, to feel that *this* is expanding. Teachers of singing insist on diaphragmatic breathing, which is also of great benefit to the stomach, liver, and other organs. By the movement it gives to the intestines their action is also assisted, and constipation is prevented.

This deep breathing may be practised several times each day (say ten breaths at a time) till the habit of correct breathing is acquired. It will be found to have a wonderfully soothing and calming effect (*see* WORRY). Such exercise should always be taken in the open-air, or in a room with a widely open window. A good plan is to take them in bed before rising, with little or no clothes on, while lying flat on the back.

Paleness, langour, irritability, and general ill-health result from insufficient breathing. Furthermore, the system becomes unable to resist disease. We know no aid to beauty more effective than the practice of deep breathing.

Breathing, in Going Uphill.—*See* BREATH, AND NERVE.

British Cholera is to a certain extent epidemic—that is, it affects a large number of people in a particular place, being, it is believed, conveyed mainly by the common house flies. War should be waged against these, and great care taken to guard food, especially that of children, against them, by using covers, etc. If this were done the appalling death-rate in summer from this disease among the young would be largely reduced. Typhoid fever and other diseases are probably also spread by flies. Care should be taken to remove promptly all refuse from about the house, and so prevent flies breeding on it.

In ordinary diarrhœa, injections of cold water by the enema will usually cure, especially if a little vinegar or a few drops of acetic acid be added to the water. But in British Cholera this proves insufficient.

This is not an affection of merely one part of the system, but of the whole. If, then, you brace with the cold enema one part, no doubt so far you do good and not harm, but you cannot by this, cure an affection of the whole system. British Cholera is a sweating from the surfaces of the whole alimentary organs. This internal sweat flows into the stomach and causes vomiting, and into the bowels causing purging that cannot be stayed by any application to the lower part merely.

The problem to be solved is how to give more life force. Whenever the injection of cold water fails, and especially when it rather increases the complaint, and vomiting or sickness shows that the attack is of the nature of British Cholera, you will do well to pack feet and legs in a good blanket fomentation. Put a little olive oil on before and after such a packing. One application may be sufficient; but it may be necessary to repeat the packing. Give frequent sips of hot water. It will be well also to use the cold injection, as it will be found to take good effect whenever the vital force has been increased by the hot packing. If cramp has shown itself, it will be needful to

cool the spinal nerves (*see* ANGINA PECTORIS), but this only when you are effectually heating the limbs.

The first injection may be followed by even an excessive motion, but if that is followed up with another injection still of cold water, there will be nothing experienced after but perfect comfort, and no more trouble with the bowels.

The violent irritation that follows after a very simple over-action of the lower bowel is quite prevented when this remedy is effectually used. In less severe cases, where fermentation of food is the cause of the disease, frequently a dessertspoonful of castor oil, or other simple purgative, will prove sufficient to cure.

Brandy often gets the credit of curing in such cases. It does so simply because the cases in which it *kills* are not taken into account. It always *lessens* vital energy, and in British Cholera increase of this is urgently required.

Bronchitis.—This frequent and severe trouble results most usually from chill to the skin throwing overwork on the lungs and bronchial tubes. These last become inflamed and swollen. A fiery heat and pain in the chest follows, the whole system becomes fevered, and breathing is difficult, and accompanied by severe cough.

Kneipp linen underwear, which is porous, and has a stimulating effect on the skin, assists it to perform its functions, and will therefore prove useful to sufferers from Bronchitis.

Abundance of fresh air will often entirely prevent Bronchitis. We have known people who suffered from it every winter for years who never had it again after learning the value of the constantly open window.

At the earliest stage, when the chill is first felt, let the patient go to bed. First sponge up and down the back quickly with hot soap and water. Dry this off, and sponge or rub gently with hot vinegar. Dry this off,

and rub with warm olive oil. This will often ward off an attack entirely.

When the trouble has fairly obtained hold, treatment must be applied to the back and chest as follows. Place on the upper part of the back a BRAN POULTICE (*see*), large enough to cover the entire shoulders and upper back. Let the patient lie in bed comfortably on this. Then apply towels wrung out of *cold* water on the chest where pain and breath-catching are felt. Let the towels be large, and at least four ply. Change for a fresh one as soon as that on the chest becomes heated. When this has been done as long as the poultice keeps hot, take all off, rub back and chest with hot vinegar, dry off, rub with hot oil, dry off, and cover all with warm new flannel. If needful, repeat the application. We have seldom seen it required twice.

If the fever is very great, use no olive oil, and for a strong patient the cold towels may be used without the poultice. But immediately these reduce the fever, the poultice should be used as directed.

In many cases where medical men have given up hope, this treatment has effected a cure.

Brow, The Weary.—Sometimes in the case of a child at school, the result of overwork shows itself in a weariness and weight in the brow. Often parents are glorying in the school successes of their children, when these are having their brains destroyed. Careful watching should ever be given to the young. The aim in education should be to draw out the faculties, and teach the young to think for themselves, rather than to cram in a mass of facts which will enable them to take prizes and pass examinations with honours.

The results of continued overwork are fatal, but in its earlier stages it is easily remedied. Hence the need for watching and treating such an early symptom as head weariness. For treatment see that the feet are warm,

bathing them if necessary (*see* BATHING FEET) Stop school at once, and give as much exercise in the open air, at play, as possible. Then rub gently with both hands up and over the brow and sides of the head over the ears, then up the back and over top of the head. Rub all over the head with the finger points (not nails), so as to raise a glow in the skin of the scalp. This treatment is best done while the patient sits, and the operator stands behind or beside him. Gentleness of touch there must be, and no irritation of the patient. With abstention from all lessons, it will soon cure.

Bruises.—For slight bruises, such as children frequently get by falling, a little butter or vaseline, applied immediately, is an excellent remedy. For more serious injuries, such as bruised nails of the fingers or toes, or such as result from violent knocks on any part, the best remedy is hot fomentation or hot bathing, whichever may be most convenient in application. Persistent and repeated treatment in this way, with oil dressing, will cure in almost any case not so severe as to be beyond remedy. Even where it is thought wise to send for a surgeon, this bathing is the proper first treatment, and will do much to relieve the inevitable pain.

Burns.—For *slight* burns, immerse the injured part in cold water, and keep there till the pain abates. This is where only redness of skin is produced. In case of a blister forming, do not break or cut it, but perseveringly cool with cold water, and leave the blister till it comes away of itself, when the sore will be found healed beneath it.

Where a large surface is injured, some other part of the body must be *fomented*; best the legs and feet, or the back, while the injured part is persistently cooled. Thus a dangerous chill is avoided. The ARMCHAIR FOMENTATION may be used, or a large BRAN POULTICE (*see both these*), and thus the heat of the body kept up while

cold water is applied to the burns. If these cannot be immersed, as in the case of the face, cover them with an air-tight covering, and apply iced or cold cloths above this. The linseed oil and lime-water known as "Carron Oil" forms the best dressing to apply. If a burn has, however, gone so far as to become, owing to neglect, a festering sore, then warm water treatment is required, as recommended for ABSCESS (*see*). *See also* WOUNDS.

Buttermilk.—Where we prescribe this, either for drinking or for external use in poultices or bathing, it is very important it should be pure and fresh. If kept too long, it causes often terrible pain when applied to eruptive sores. There must be no "watering" or doctoring with cream of tartar, if good results are desired. If the milk be too long kept, and cannot be had fresh, it may be mixed with a little sweet milk and all churned well together. Then it may be used. If still painful, mix again with more sweet milk. To soak diseased skin in good fresh buttermilk is so powerful a means of cure, that to procure it a good deal of trouble is well spent. It is also invaluable as a daily drink for regulating the bowels, and maintaining health. Sterilise all sweet milk used.

If buttermilk cannot be had, acetic acid or vinegar, or the juice of lemons, may be mixed with sweet milk or even water, until the mixture attains about the usual sourness of buttermilk. This makes an efficient substitute.

Buttermilk Poultice.—Boiled potatoes beaten up with fresh buttermilk make an excellent poultice for all eruptive sores, scabbed heads, and heated skin affections. After these always apply soap lather (*see* LATHER). If buttermilk cannot be had, use acetic acid or vinegar, as above.

Cancer.—Swellings in the breast often arouse fear of cancer, but are generally very simple affairs and easily yield to treatment as in article BREAST, SWELLING IN. If not, we should chill the diseased growth so as to arrest it. Now this, as we have proved, may be effectually done, and the sorely tried patient may be saved a world of pain, and perhaps cured. We have seen more than one apparently desperate case, even where the breast had been cut off and the evil was again showing itself, in which effective cooling arrested the growth and saved the sufferer. When a growth of this kind has gone a certain length, there is severe pain. The cooling removes this, and secures the patient unspeakably precious rest without narcotics. But this is not all: it puts an effectual stop to the swelling. If the case has not gone very far, the swelling falls, and may disappear; but even when it has gone too far for this, the disease is stayed, and all symptoms of it are lessened. All swelling but the actual separate growth is removed. For instance, when the swelling has passed from the breast into the armpit it has been dispelled, and entirely confined to the actual substance of the tumour. This is managed simply by the persistent and vigorous use of cold towels. They must be large enough to allow of fourfold covering of the whole breast. They are wrung out of cold water at first, and, if possible, cooled with ice instead of being wrung out after. One at a time is kindly pressed all round and over the swollen breast. It is heated in one or two minutes, and must be changed. The second is pressed round and all over the breast in the same way. It is soon heated too, but you may have three of them in a circle, and if you have a bit of ice for those that are cooling, you have cold enough. Some would put on an ice-bag, and let it lie, but we have never been able to advise this, as it is very apt to destroy the outer skin by too severe cold. This treatment requires work—no doubt of that—but the effects are well worth it.

When the cooling treatment, given twice a day, or oftener if it can be without discomfort, has reduced the swelling and put back the tumour, till it may fairly be regarded as capable of absorption, it will be well to try the effect of hot fomentation by bathing (*see* BREAST, SWELLING IN). This will not do harm, but good, if it is only used so far as to try whether the stage for hot treatment has been reached. If the hot bathing is agreeable, and instead of causing pain, rather soothes and comforts, it may be strongly tried. But this will be only if the effectual cooling has put back the disease, or if it has been really mastered. So long as it shows a tendency to increase, it will be well to continue the cooling.

Even if it be not possible to remove the disease, its progress may be arrested, and it may be rendered dormant for the rest of life. We know persons sent off to die with growths who are now quite well and have been so for many years, with these growths only rendered dormant. Even if this is not possible, it may be that we render the growth so slow that it shall come to nothing important in the remainder of even a long life. We should never hesitate to do our utmost in any case.

Besides the local treatment given above, vital action in the whole bodily system has to be increased on a definite line. This is the ripening and removing used-up substance from the body. It is sluggish ripening of substance to which we trace the morbid living growth; that sluggishness must be overcome. The first and most important means for this is fresher air for the lungs. The seaside home, if there are no drugs or drinks prescribed in ignorance, nor any other drawback, will be found of immense value here.

Next in importance to fresh air is pure distilled water. It should be used both in preparing food and for drinking. This constant use of distilled water is one of the most important remedies in cases of cancer. Comfortable clothing (*see* UNDERWEAR) should be worn by night and

day, and damp avoided. The food should be such as can be most easily assimilated. Whole wheaten meal in various forms and pure water work wonders on "hopeless cases."

But when all these conditions have been supplied, "pack" the whole body at eight o'clock at night in cloths lightly wrung out of hot vinegar and water, half and half, and covering these with dry sheets and blankets, give the patient an hour in this "pack." On taking out of this, rub gently all over with hot olive oil, dry that off and put to bed. In the morning, at half-past seven or so, pack in a soapy blanket for an hour, then sponge with vinegar and rub with oil. Take a stick of good liquorice, with half an ounce of senna leaves, and put these in a quart of water, boil the whole down to a pint, giving a teaspoonful of this in a little hot water three times a day.

Cancer in Face.—Treat as far as possible as recommended for breast cancer.

Cancer in Foot.—We have noted one case in which "Cancerous Gangrene" in the foot, pronounced incurable by the medical attendant, was cured by our instructions in the following simple manner. BUTTERMILK POULTICES (*see*) were used over the whole foot to thoroughly cleanse the sores. These were then carefully lathered with soap (*see* LATHER and SOAP). Vinegar or weak acid was applied with sponges and syringe after this, and made thoroughly to penetrate all the sores to the bottom. This was done twice a day, and in one week improvement set in. In a comparatively short time the patient could walk miles without fatigue. This treatment may be applied to all angry sores.

Cane Syrup.—In the original edition, good treacle was recommended as a laxative. This treacle, which was prepared from cane sugar, we understand is now not to be had—what is sold as treacle being largely mixed with glucose. We therefore recommend instead the use

of golden syrup made from pure cane sugar. This can be had (in tins), guaranteed by the makers to be genuine.

Carbuncle.—*See* BOIL.

Catarrh.—Is simply an inflammation due to impurity of the blood. These impurities arise from bad air or wrong food, and remain in the body till a chill of some kind or other forces the blood and the impurities with the blood to some part, resulting in inflammation. Catarrh in the mucous membrane, connected with respiration, is commonly called a "cold," and is decidedly infectious (*see* AIR). A cold must be regarded as an effort of Nature to get rid of these impurities. Breathing of fresh, even cold air, will expedite, not hinder the cure.

Washing the hands and face in *cold* water, and drying vigorously, will often cure it when beginning as "cold in the head." Cold, applied in a certain way, cures the after effects of chill, but it must be so applied as only to affect the part to which it is applied, while the general heat of the body is kept up. Catarrh may occur in any internal membrane of the body. If these can be reached, as the nostrils, or even the bowels, may be by syringing, then nothing is better to effect a cure than cool water and vinegar, or weak acetic acid. Brush the nostrils often with this, and cold in the head will soon be cured. It can be applied still better by means of a nasal douche. Syringing the bowels with this cool acid mixture in the more serious catarrh of these will also cure. Patient perseverance is wanted, however, in the latter case. Get also the external skin to act thoroughly. Where the cause of internal catarrh is exhaustion, through overwork or worry, the cause must be removed. Let the sufferer learn trust in a living Heavenly Father, and cast all burdens upon Him, and the physical treatment will have a fair chance to cure. *See* BREATH and SKIN.

Cauliflower Growths.—These begin like warts, and in the earlier stages poulticing and soaking with weak

acid almost invariably cure. After some months the growth looks like the head of a cauliflower, and becomes dangerous if on a vital region. It is not really a parasite, but rather a diseased state of the skin, which is perfectly curable. First every part is carefully cleansed with a small camel's-hair brush and weak acid (*see* ACETIC ACID). Then the buttermilk poultice is applied all night, or even night and day (*see* BUTTERMILK POULTICE). Cleanse again after poulticing. Careful and persevering continuance of this treatment will effect a cure.

Cayenne and Mustard.—Mustard spread on a *cold* towel and applied to the spine or lumbar region of the back is often an effective aid to the cold treatment. If such applications have to be made more than once, cayenne pepper is preferable to the mustard, and equally powerful. When cold cloths alone fail, this more powerful treatment may be tried. Pain and burning after cayenne are relieved by applying olive oil.

Cayenne Lotion, or "Sweating Mixture."—This is made with one or two tablespoonfuls of cayenne pepper (as desired weak or strong), half a pint of white vinegar, and a pint of boiling water. These are mixed and infused for half-an-hour. The mixture is then carefully strained so as to remove the pepper grains. Dilute, if too strong, with water.

Cayenne "Tea."—Infuse an ounce of good cayenne pepper in a pint of boiling water. Strain out the pepper. This produces a glow of heat on the skin when rubbed on, and may be a valuable adjunct to oil rubbing where that is intended to raise such a glow.

Changing Treatment.—To wisely alter and arrange the treatment in any case is of the utmost importance. Treatment which at first gives great relief will often become ineffective or even painful. Then some other way of cure must be tried. Sometimes cold applications

will become painfully cold. Heating for a time is then effective, and cooling can again be given after the heating. Soapy lather on an inflamed part will do delightful service for a while, then it may become painful. Warm oil may then be used instead. When this becomes irritant, a return to the soap will cure. Or the hot bathing of a sore knee may be most effective for a while, and then may give rise to sore pain. In such a case, cease the bathing, and for a time apply the soapy lather. Do not despair because a thing "loses its effect." Its apparent loss of power only indicates a needed change of treatment. Common sense will guide in this, and the true healer and nurse will be able to judge what is best to do.

We have a case in which, after long rubbing with acetic acid, the skin seemed to become so used to it that little or no effect was produced. For a few days an alkali, in the simple form of "hartshorn" (ammonia) was rubbed on instead of the acid. The acid rubbing was then resumed, and produced its usual effect. Such plans will occur to all who are thoughtful, and do not just blindly follow instructions.

Cold-water cloths have got in certain circles to be fashionable, so that they are used exclusively in all cases. A knee joint has got wrong, and it is deemed the right thing to wear a cold bandage constantly round it. But this fails to have the desired effect. It may not fail entirely, so long as there is some vital energy on which to "come and go," as we say, the effect of the reaction will be to give a measure of relief. But in very many cases this vital energy is deficient. If in such a case the person advising it has only thought enough to have recourse to an hour's hot fomentation once or twice a day, the effect desired may not be long delayed. Supposing something like inflammation of the lungs has to be dealt with. Cold is applied on the chest, as it is often most successfully applied, when there is still a good deal of energy to be drawn upon. But in this case there is not

sufficient energy. Well, pack the feet and legs in a thoroughly hot fomentation, such as will renew a full supply of heat all over the body. Then you will find the cooling of the chest thoroughly effectual. In a very considerable correspondence we meet often with this resolve: "We shall continue to do as you direct till we hear from you again." We remember telling a young man to put a hot bran poultice between his shoulders for a troublesome cough. We saw him no more for months, but when we did meet him he apologised for not continuing the application. He said, "I poulticed my shoulders for three weeks, and they began to get soft, so I stopped doing it." We certainly thought his head had been soft to begin with! Why should not sensible men and women get a little independent thought of their own?

It may be well to remark that the cessation of all treatment is a change, and often a very beneficial one too. If you do not know what to do when any treatment is "losing its effect," or having the opposite effect to that which it had, just cease to do anything till you see manifestly what is needed. The rest of a week, or even two, may be just the thing wanted. If it is, it will ease the pain; if it does not, you will see that probably the opposite of what you had been doing will suit.

Chapped Hands.—Our idea is that this is caused by the soda in the soap used. At anyrate, we have never known any one to suffer from chapped hands who used M'Clinton's soap *only*.

It is made from the ash of plants, which gives it a mildness not approached by even the most expensive soaps obtainable.

If the hands have become chapped, fill a pair of old loose kid gloves with well wrought LATHER (*see*), putting these on just when getting into bed, and wearing till morning. Doing this for two or three nights will cure chapped, or even the more painful "hacked" hands,

where the outer skin has got hard and cracked down to the tender inner layer.

Chest Pains.—*See* ANGINA PECTORIS.

Chest Protectors.—These are often piled on the front of the body, while the far more important *back* is left exposed. In many cases of delicacy and cough, particularly with women, it is far more effective to protect the upper back with warm extra flannel than to place covering on the chest. This alone will sometimes cure distressing coughs. In every case, such "protection," whether to back or breast, should be such as to secure free escape of perspiration (*see* UNDERWEAR). A sheet of fine wadding is excellent. Where less heat is desired, new flannel is the best. Often, also, chest trouble is best helped by protecting the soles of the feet. If these and the back are kept warm, there is little fear or harm at the front of the chest. Let the back covering, where it is used, come down as far as the top of the hip bones.

Chilblains.—These occur in hands and feet where the circulative power is feeble, either from weakness or from tight pressure of boots or gloves. The cold has power, owing to lack of circulation, to partly kill the skin, which thus becomes painfully inflamed, and swells. To increase and maintain circulation in the part is to cure it. In the early stages, when heat and itching are felt, a good rubbing with hot olive oil and cayenne tea will often cure. But if this fail, pack the foot or hand in cloths soaked with vinegar. If the pain is great, place the packed foot or hand in hot water for a few minutes or more. After this immersion repack with vinegar-soaked cloths, cover well up with dry flannel, and wear this packing all night. In cases where weakness is the root of the trouble, rub the back once a day with hot oil until a glow of heat arises all over it. Do this daily for a fortnight *at least*. Where tight boots or gloves are the cause, these must be discarded for more easily fitting ones.

Child-bearing.—Simple remedies such as we advocate are found of immense service in mitigating both the pains of child-birth and the troubles coming before and after it.

To see that the medical man is one thoroughly competent is the first duty of those responsible in such a case. Incompetent and careless doctors are the cause of much trouble. Get, then, the *best you can*. Much may be done, however, to prevent trouble by very simple means.

The sufferings usually accompanying pregnancy and the birth of children in civilized countries are largely confined to the higher classes. Working women escape much of the pain their more luxurious sisters have to endure. Travellers tell us how, among the Red Indians, Negroes, South Sea Islanders and others who live more in a state of nature than we, the women suffer but little in child-birth, and return to their ordinary occupations almost immediately after the event. The adoption of a simple and natural diet, healthy exercise combined with sufficient rest and rational clothing, have been found to ensure an easy delivery as well as good health for mother and child.

The *diet* of the pregnant mother is of great importance. Too much food is worse than useless. Food should only be taken of such a kind and quality as can be easily assimilated. The mother is best who takes only so much light food as she can easily convert into good blood. More, simply loads the system with useless waste or fat.

The diet during pregnancy should be mainly vegetables, fruit, salad, rice, tapioca, milk, eggs in moderation, and a small amount of wholemeal bread. A little meat or fish once a day is allowable for those whom it suits, but rich, spicy dishes, pastry, strong tea, coffee and all alcoholic drinks are very injurious. Three meals a day with no "snacks" of any kind between, are sufficient. For those who have reason to dread a hard confinement, oatmeal is best avoided. To avoid fluids while eating is important, especially for those who have a weak digestion.

One may drink half-an-hour before meals or three hours after, but if plenty of fruit and salad is eaten and little salt used with the food there will be little thirst. Too much fluid should not be drunk, if thirst is felt, water very slowly sipped will quench it better than copious draughts. During pregnancy there is often a craving for acid fruits, this is nature's call for what is needful at such a time. Fruits and green vegetables supply a large quantity of most valuable salts which go to make good blood and build up all parts of the body. Never force the appetite. Food that is neither relished nor digested will do more harm than good.

It must never be forgotten that the blood of the child is being directly derived from that of the mother, consequently if the diet is of such a nature as to induce overabundance of fat, the child will be born too fat. This does not mean a healthy child by any means, and it may mean considerable extra pain for the mother. A mother inclined to thinness need not fear that this diet will reduce her. The taking of cream, eggs, bacon and other fat foods often has the opposite effect from that desired. A thin person adopting the above light diet will generally get into good condition.

Under the head of *exercise*, the first we would recommend is general housework, provided windows are kept open, avoiding the more laborious parts, and always being careful not to get over-fatigued. Light gardening, walks, if not too long, and light gymnastic exercises are all beneficial. The exercises described in the appendix, practised for ten minutes at a time, once or twice a day, are quite suitable for the expectant mother, while deep breathing (*see* BREATHING, CORRECT METHOD OF) is most valuable.

The subject of *dress* should be particularly studied. Garments which are light, warm, porous, and which in no way impede or restrict the movements and natural functions of the body, should be worn. It has been found that those who wear no corset nor tight band or bodice

will suffer but little, if at all, from morning sickness. Corsets, by holding immobile the waist muscles, prevent their getting strong. Anyone who is accustomed to corsets, when she leaves them off for a day will complain of "such a tired feeling, as if she would break in two." This is easily accounted for, the muscles, unused to the task of holding up the body, are flabby and useless. These same muscles when called on, at the moment of delivery, are totally unfit for their work, hence comes a large amount of the unnecessary suffering. The remedy is—discard the corsets, bear with the tiredness for a week or two and regularly practice the exercises recommended above, especially the waist exercises of bending and turning. The muscles will soon gain strength, and the corset be found to be quite unnecessary and most uncomfortable.

In the commencement of pregnancy, when there is sickness and vomiting, we have seen it cured, even when so severe as to threaten life, by spreading over the patient's irritated stomach, a soft, fine soap lather (*see* LATHER and SOAP). It acts in such cases like a charm. The lather is well and *gently* spread with a *soft* brush all over the stomach. Wipe it gently off with a *soft* cloth. Cover again with fresh lather. Do this five or six times. Then treat the back in the same manner, behind the stomach. In half-an-hour all retching should cease. When the stomach has had a rest of some hours, a small quantity of light food may be given. Half a Saltcoat's biscuit (*see*) thoroughly masticated, and a little milk and boiling water may be enough to take at one time. Do not force the appetite, wait until a desire for food is felt. Pass by degrees to ordinary food.

If the mother, at any time, feels faint, on no account give brandy. Drop five drops of tincture of cayenne on a lump of sugar. Dissolve it in half a teacupful of hot water, and give this instead. In cases of heartburn, take small drinks of hot water, say a tablespoonful every five minutes. A very great help to the expecting mother is

found in the cold sitz bath (*see* SITTING BATH). Baths known as "Matlock Baths" may be had, which suit very well for this purpose; but a tub for washing, of a suitable size, would do very well, or even a large sized bedroom basin will serve. Put in cold water, three inches deep, and let the patient sit in it. In winter have the water cold, but not freezing. The rest of the body may be kept warm with a wrap, and if the patient feels cold, the feet may be placed in hot water. Taken once or twice a day this bath will have a tonic effect on the whole system, and a markedly cheering effect on the mind. The time in the bath is shorter or longer according to the patient's strength and power of reaction. Feeling will be the best guide, but even a dip of half-a-minute will do good.

In regard to the actual birth, we repeat that those concerned should see to the attendance of a *really* skilful medical man. Chloroform in the hands of such a doctor is of immense value, but in unskilful hands it is dangerous. Therefore let expense be no bar, where it is possible, to the obtaining the best medical aid that can be had.

Many trivial matters greatly affect the mother during child-birth, and the few succeeding hours. We have known a stupid remark by an incompetent nurse spoil a mother's health for months. The greatest care must be exercised by all concerned to say only cheerful and soothing things to the sufferer. Even the aspect of the room is important. It should look sunwards, if possible, and hideous pictures should be removed, while perhaps some text speaking comfortably of the Good Shepherd, who "will gently lead those that are with young," may be hung up. Trifles these, but their effect is no trifle.

Do not keep the patient in too hot a room; fresh air is of great value. Do not leave her for nine days in an unchanged bed. The necessary sponging and changing should be done daily. Cleanliness means comfort here, and comfort health. It is not early sponging and washing,

but a nine days' steaming in unchanged bedclothes which causes chills. After cool sponging, a gentle rubbing under the bedclothes with hot olive oil, over the body and limbs, will be very refreshing. All clothes, etc., and the hands of the attendants should be most carefully washed and cleaned before they touch the patient. Too much care in this matter of cleanliness cannot be taken, as it is of the *first importance* as a preventative of many troubles.

What are called "After Pains" often give much distress. Drugs and alcohol should be strictly avoided. The difficulty here is in the objection so many have to cold applications. These, after child-birth, are not dangerous, but form a short and simple road to health. Making handfuls of soapy lather (*see* LATHER) and rubbing these gently over the pains, both back and front, is most powerfully soothing, and has no tendency to chill.

Where severe pains, indicating inflammatory action, are felt in the bowels, this lather should at once be applied, and followed up with cold cloths over the bowels, applied as to the chest in BRONCHITIS (*see*). The bran poultice should always be applied at the same time, putting it on before the cold towels, over all the lower back (*see* BRAN POULTICE). Sips of hot water will also powerfully help in all cases of such pain.

Treatment on these lines will deal with even very severe cases of After Pains.

Children and Teachers.—Children are of the utmost value to society; through any one of them the divine light may shine which will bless many generations. They are very easily hurt by unwise treatment and teaching. We would have the teacher and parent impressed with the preciousness of even the most delicate child. *Health of mind and body*, ot attainment, must be the *first consideration* in the teaching of the young. It ought to be as much the teacher's business to see that pupils do not suffer in health as to see that lessons (often

quite useless) are learned (*see* articles on BROW, WEARY, and EYES, FAILING SIGHT). We would again emphasise the truth that no child should be undervalued for its delicate health. Delicate children have often become men and women without whom the world would be vastly poorer.

Children in Fever.—Fevered children, whether in any actual fever, as scarlet, typhoid, or any other, or merely heated from some minor ailment, should be treated as under FEVER. Have two small towels, wring them tightly out of cold water, fold one gently round the head. *Press it gently* all round and over the head. It will be heated in one minute in some cases, longer in others. Change it for the other then, and proceed alternately till the head is cooled. Perhaps that may take half-an-hour. The time will be less for a young infant, more for a boy or girl in their teens. Common sense, and an examination of the pulse, will guide as to the proper time. The head is the chief consideration in this treatment, but attention to the state of the stomach and bowels is also very important. Any indigestible substance must be removed, and sips or small drinks of hot water will greatly help in this, as well as proper medicine. Castor oil is a good, simple drug for ordinary cases. If there is coldness in the feet in such fevered cases, a fomentation may be applied over the legs, or even up to the haunches. This will greatly reinforce the cooling of the head, and prevent any possible chill. The water used for cooling should be about 50 deg. F., or at least near that temperature, in the case of infants. Water which has stood some time in an ordinary room will do excellently. It should neither be icy nor warm. Typhoid fever itself has been cured with this head cooling alone.

Children's Clothing.—An infant's clothing should be soft, warm, and light in weight, covering all parts of the body with equal warmth. Tight bands and long, heavy

skirts should never be used, the dress and petticoat being just long enough to keep the feet covered and warm. If from the first a baby is "held out" always after being nursed, it learns to urinate at that time, and the clumsy diapers can be dispensed with in a few months. *No ordinary pins* should be used, and as few safety pins as possible. Tapes properly arranged will keep all secure.

Flannelette should never be used, being so very inflammable (*see* CHILDREN'S DANGERS).

With infants, as with older children, it is a mistake to heap on too much clothing. Many children by such coddling, which is intended to prevent them catching cold, are rendered delicate and susceptible to chills. Just enough clothing should be worn to keep the little one comfortably warm and no more. The same applies to bed-clothes; they should be light and not excessive, only enough to keep the child comfortable.

Babies thoroughly enjoy a time every day without clothes, when they can kick to their hearts' content. If this is begun by degrees, a short time at first, gradually getting longer every day, there will be no danger of giving the child cold through letting it lie unclothed, on a rug on the floor for half-an-hour at a time, with the window open. The air-bath will invigorate and strengthen the system. Rubbing with the hand all over the little ones body during this time will be enjoyed, and effectually prevent any chilliness, if it is dreaded.

Children's Dangers.—Avoidance of the causes of disease requires some idea of the dangers to which children are exposed in the usual upbringing. For instance, sitting on damp ground, cold stones, or even a cool window-sill, is a fruitful cause of bowel trouble. The remedy for such an exposure is proper warm FOMENTATION (*see*) of the chilled parts, followed by hot olive oil rubbing and careful clothing.

Again, *rich diet*, especially for delicate children, is a great cause of trouble. What we have written concern-

ing food, and the article ASSIMILATION, should be read to guide on this.

Again, the child is exposed to falls, and falls into water, leading sometimes to drowning. Timely thought would prevent nearly all such accidents. Do not wait until the trouble comes. Protect exposed streams and wells near the house. Shut doors and gates in time. Also the directions of the Humane Society for the recovery of the partly drowned (*see* DROWNING) should be in every house, and as soon as possible both boys and girls should learn to swim.

Again, children are in danger through careless attendants. They may be let fall, or capsized in perambulators. Spinal injury is often caused by such falls. In case of any broken or disjointed limbs, the bandaging of infants should be of a gentle kind, and encasement in starch or plaster jackets should be avoided. In every way the natural growth and circulation should be helped, not hindered by strapping and tight bandaging. The timely consulting of a *really good* doctor will often prevent serious trouble in any case of a fall.

Another source of danger is the exposure of children to the possibility of burning or scalding. Wherever there are young children fires should be guarded, and matters so arranged that they cannot come in the way of boiling water. Much that seems impossible in such protection becomes easy enough to a determined person, and a great deal of sore illness can be averted by taking a little trouble. A child should never be in the place where there is a pan of boiling water on the floor, nor in any house should it be *possible* for a child to pull a kettle full of boiling water on its head.

If, however, scalding occur, apply the cold treatment as detailed in the article on BURNS.

In case of contracted limbs or features, occurring from severe burning, the rubbing treatment (*see* CHILDREN'S HEALTHY GROWTH), will be effective as a cure.

Children's clothing should never be made of flannelette, it is so liable to take fire if the child approaches the grate. At hundreds of inquests coroners have directed attention to the terrible loss of life from this cause.

Medicines and all poisonous substances should be carefully labelled, and kept out of children's reach. If by accident a child should have taken poison administer an antidote (*see* POISONING). Should a child swallow a nail, button or some such hard substance, do not give any purgative medicine. It will pass out more safely when embedded in solid fæces. Examine the stools carefully so that anxiety may be allayed when the foreign substance is seen.

Children's Deformed Feet.—*See* CLUB FOOT.

Children's Healthy Growth.—Often either the whole system or some part fails to grow properly. In this way the spine or legs may become curved, or generally the child is small and feeble. Growth depends largely on the organic nerve centres. Lack of power there causes even deformity itself. Treatment, therefore, must be such as to restore to these centres their energy, and increase it. Do not force the child to stand or walk when wearied. If he uniformly refuses these attitudes, have patience till he gathers power. Wash all over at bedtime with warm water and M'Clinton's soap. Dry, and rub all over with warm olive oil. Wipe this also gently off. Let the rubbing be such, along each side of the spine, as will bring the organic nerves into action. Gentle, slow, steady motion of the hand is best for this. All painful or irritating rubbing is positively hurtful. Let this be done every night, and even incipient deformity will be cured in time.

The nerves are in some cases irritable, and great restlessness and involuntary movement, accompanied even with twisting of the neck, shows itself. This will yield to skilful cooling of the spinal nerves with damp cloths. *See* ST. VITUS' DANCE.

An opposite kind of nervous failure shows itself as paralysis. The hand and arm, or foot, trails helplessly, owing to motor nerve failure. This will often yield to the spinal rubbing and poulticing mentioned above. Another state of failure is indicated by "numbness" in the fingers and toes. The spinal rubbing and poulticing with bran will also be effective for this. Sometimes lack of nerve force shows itself as failure to walk at the proper time. The child cannot use its limbs properly, although these are right enough in shape and size. The cure for this is persistent gentle rubbing with warm oil, as recommended above, over the whole body, but especially over the back. Feel for the muscles and bones, and adapt your hand to their shape, going down into the hollows immediately on each side of the spine, and paying particular attention to the *upper* part in the failure of the *arms*, and the *lower* part in failure of the *legs*. This rubbing is a most powerful remedy, but it must be patiently and well applied twice a day for a length of time. Bear in mind that gradual cures are most permanent. Even creeping paralysis in adult persons yields to this rubbing. No doubt it is *work*, but it is well repaid. All troubles where failing nerves are concerned may be treated with some modification of this heat and rubbing. Our readers can easily adapt it to particular needs by a little thought. *See* SPINE, MISSHAPEN, and MASSAGE.

Children's Limbs.—Frequently a failure of some kind shows itself in the limbs of some children. Usually it appears as either *bending* or inability to walk at the proper age, or both together. To use "steel boots" and kindred appliances is to ignore the true nature of the trouble, and most likely to increase it. What is wanted is proper growth in the limb. To secure this, the nerve system of the spine must be stimulated, and there is no better stimulus to be had than "massage." When any substance is rubbed on, it is almost always the rubbing, rather than the substance, which has the good effect.

Hence we recommend rubbing with simply good olive oil. For an infant, the back must be massaged very gently, taking care not to hurt the child in any way. It should be applied especially up and down each side of the back bone, where there is a softer region, full of important nerve centres. The limbs may also be gently rubbed. A genial heat should be raised in all the infant's body by these means, and, if rightly done, the child will eagerly wish for it again. Half-an-hour a day may be given to this. It is well to persevere for a long time, and never give up hope. Many a weak-limbed child has grown up a strong, healthy man or woman. *See* MASSAGE.

The food in such cases should be good ordinary food. We have never been able to see the good of cod liver oil that is so generally recommended. It seems to us a most unnatural thing for a human being, young or old. Cream and butter will supply a far more easily assimilated fat at much lower cost. We may also say that honey is more wholesome and fattening than malt extract, and costs only one-fifth of the price.

The feeding of children on corn flour, often made with but little milk, is a fruitful source of rickets. The same may be said of white bread, the flour having been largely deprived of its food salts. Giving children lime water, with the idea that the body can convert it into bone (as a hen makes her egg shells out of old mortar) is an entire mistake. The human system cannot use such inorganic material. The men of best bone, so far as we can judge, are those who have been nourished in great measure on good oatmeal.

Children's Nerves.—The nervous system of children is often damaged by shock or fright, sometimes very seriously, so that paralysis or hysterical affections come on.

Blindness, deafness, loss of speech, every possible loss of function may follow a violent shock to a child's mind or bodily system. Care must be taken to avoid this. The moment you see the child affected by any strange sight or

sound have, if possible, the child removed or the affecting object put away, or have some one who can soothe the child brought to calm its mind. This properly done, and done quickly, will usually prevent any evil effects. If, however, these come on, treatment can do a very great deal to remedy the ill. If fits come on, lay the child flat on his back, with head slightly raised. Place a piece of cork or wood between the teeth, fastened so as to prevent the possibility of its being swallowed, and loosen all the clothes, until the fit is over. Continue to soothe the mind, and instil happy thoughts such as God gives every Christian the right to think, even in the worst times of trial. Bring before the child's mind some cheery tales or interesting objects. Allay all fears, and soothe all sorrows, as far as possible.

If, however, the fits come on again, with blackening of the face, *do not treat harshly*, but apply a cold towel along the spinal cord in the morning in bed. This will soothe even unreasonable passion, and remove stubbornness. Or if the fit is "on," put warmly to bed, and then apply the cold towel. Medical aid, when available, should also be summoned. If a faint comes on, that points to the need of a hot fomentation along the spine instead of a cold towel. It is not difficult as a rule to distinguish between the fit, with its frequent convulsive cramps and blackening of the face, and the simple faint of exhaustion. In the first the patient is all "strung up," and in the last the very opposite.

Children's Sleep.—This most important matter of good sleep for the child depends not only on health of body but on ease of the infant's mind. It is wrong to treat the child otherwise than through the understanding, where he is afraid, or in a strange place. Waking up, after being put to sleep in a strange room, the little one may receive a shock which may prevent sleep for the rest of the night. If he be patiently soothed and matters

explained, all will be well; but it is a great cruelty to thrash or threaten in such a case. To frighten a child with ghost stories, or "Bogies," IS TO COMMIT A SERIOUS CRIME. It is not dealt with by the law, but it certainly deserves to be. Never bring before a child's mind any *imaginary terrors;* rather teach it to understand them in such a way as to remove any cause of fear. But do not *force* a child to examine an object which it fears, you may do terrible damage before you can explain. All fears should be most carefully dealt with, and no force employed; the little one who has no imaginary terrors, and is kindly taught to think every fearful image at bottom some innocent cloak or shadow, will sleep soundly and grow healthy in mind.

When, however, ill-health is the cause of wakefulness, other means must be used. Cold feet, and chilly feelings generally, frequently keep children from sleep. Pack in such cases the lower limbs up to the waist in thick folded flannel FOMENTATION (*see*). This will often not only give sleep, but prevent more serious trouble. All soothing powders and narcotic drugs should be most strictly avoided.

Often the child is sleepless from feverish heat instead of coldness; then cooling applications should be used (*see* CHILDREN IN FEVER). These may take the form of two caps for the head of thickest cotton cloth: one, tight fitting, to be wrung out of cold water and put on, the other, looser and dry, to be put on over the first. This alone will often secure a night's sleep. Or the head may be soaped (*see* HEAD, SOAPING). It is inadvisable to rock a child to sleep, it will go to sleep if comfortable.

Children's Strength.—The question often arises as to the ability of children to bear certain kinds of treatment. It must ever be remembered, both in hot and cold applications, that the infant should be *gently* dealt with. Violent cold and burning heat must alike be avoided.

With a gentle application of heat before bracing cold is used, considerable power of endurance is imparted. Strong blisters and violent medicines should never be used. Very much less treatment will affect the infant than that required for an older child. And in almost every case the most durable cures are reached by gradual progress.

Children's Swellings.—Sometimes these occur as merely relaxed tissue full of blood. In this case everything about the part seems right and healthy except the swelling. The skin is right and the temperature also. Treatment such as restores nerve energy will usually cure these (*see* CHILDREN'S NERVES). In other cases the tumour will be full of watery waste, or there may be a simple dropsical swelling owing to failure in kidney action. This last is usually easily cured. It ought never to be "tapped," as this draws off the strength desired. A simple FOUR-PLY BANDAGE (*see*) of new flannel worn round the body will often be enough to cure infants of even dropsical tumours. In other cases this is used in conjunction with the bran poultice and rubbing recommended above for cases of nerve failure.

Wherever the swelling is, increase the vital force that supplies the gland, and so you will cure the whole evil at its source. Many will tell you to "purify the blood," but there is no blood purifier like the system which God himself has provided, in the organs of the body made for the purpose. Only increase the action of these, and you will have pure everything as well as pure blood. You will do it by good fomentation, by good rubbing, by judicious clothing, and also by wise feeding. You will do it to some extent even by good kind words. You will help the process by good, clean washing, such as warm vinegar gives over a weakened surface. You will scarcely fail to gain your end if you use these means in time.

Children's Teething.—*See* TEETHING.

Children's Treatment.—This should always be managed so as to soothe and not excite the little patients. They are very sensitive to heat and cold. When these are applied the child often cries, so that the "treatment" is condemned and given up. What should be condemned is the nurse's want of skill. In every case the cold or hot application should be so managed as to be agreeable. Very gentle heat at first may be succeeded by stronger heat without shock. So mildly cool applications may be followed by colder ones in the same way. There is no sense or benefit in dashing a burning poultice or freezing towel on a delicate person, either infant or adult, and sense is above all our guide in these pages.

Chills.—(1) Nerve or imaginary chills. These are *feelings* of cold, where there is no real chilling; the back feels as if cold water were poured down it, or even the whole body feels chilled, when an examination will show that there is no real chill whatever. Nervous patients are peculiarly liable to this, and often are greatly alarmed at it. The treatment in such cases is partly mental; let the patient know that the chilly feeling is only a *feeling*, and nothing alarming. This will often of itself remove it; so will a cheery thought or a cheery talk. Physical treatment may begin with such a rubbing of the head as is recommended in EYES, SQUINTING. Then treat the whole body to a gentle massage on similar principles. This will sometimes cause nerve chills at first to increase; but the patient will soon disregard this, and the squeezing very gently of the muscles will stimulate and revive the organic nerves. Warm olive oil used in this squeezing process will help greatly. It may be that a considerable time will be required before these nerve states are entirely overcome, but with anything like careful treatment they will gradually be so. Keep the patient warm in bed the while. Give easily assimilated food (*see* ASSIMILATION). A mixture of milk and *boiling* water in equal quantities

may be freely taken. This treatment will besides greatly help nerveousness of every kind.

(2) In the case of *real* chill to the surface of the body, *shivering* is an early symptom. If the frame is strong, the shiver may pass off and no evil results follow : but frequently this is not the case, and trouble is apt to intervene. In such a case give a thorough rubbing all over the body, and especially the back and chilled part, with warm olive oil ; this, if applied early enough, will probably prevent all ill consequences,—it will at least mitigate them. If the chill has passed into feverishness however, this treatment will not suit ; but we only deal here with the cold shivering stage. The rubbing will be greatly assisted by a good hot fomentation to the feet, or even up to the haunches. The use of Kneipp linen underwear, by promoting a healthy action of the skin, and rapidly conducting away the perspiration from its surface, will do much to prevent chills, either real or imaginary. *See* ANGINA PECTORIS, UNDERWEAR, MASSAGE.

Chloroform.—*See* CHILD-BEARING.

Circulation of the Blood.—Nothing is more important for the health or healing of any organ or part of the body than a good supply of arterial blood. Venous blood, collected by the veins after it has done its work all over the body, or blood stagnating in congested organs, is useless for growth and healing. To promote a vigorous circulation of blood in any part we wish to cure is, then, of great importance ; this may be done by helping the heart in various ways, especially if that be weak. Lying down, and lying comfortably on the face, greatly assists circulation. Placing a fainting person in this position will often suffice to restore him. In congestion of any part, if possible keep that part,—head, hand, or foot, as the case may be—above the level, so that the escape of blood from it may be easy. *Raising* an inflamed finger or toe thus, and keeping it up, will often relieve severe pain. In

inflamed kidneys, make the sufferer lie on his face as much as possible. Other positions in other cases will be suggested by common sense.

Again, heat expands the vessels of the body, and cold contracts them. Cooling a congested part assists to drive excess of blood out of it, and heating some other part opens accommodation for the blood so expelled. This explains our hot poultice and fomentation as used with cold cloths. Common sense will show us how to apply it as a principle of treatment in many cases.

Again, a congested limb may often be very greatly relieved by proper rubbing along the soft parts, the strokes being firm and steady, and directed from the extremity of the limb towards the body. This rubbing along the thigh relieves very much all swellings in the foot, ankle, leg and knee. This principle may be widely applied by a little common-sense thought.

Climate and Soil.—The soil on which one lives is a matter of primary importance ; it may be a matter of life or death for a weakly person, but it is important for every one. First, as regards the subsoil on which a house is built. If this be clay, or impervious rock, then no possible system of drainage can make the site a dry one ; this condition of affairs will be very bad indeed for health. No house should be built on such a soil if at all possible to avoid it. Light open gravel and sand, as subsoil, make the very best health conditions. The surface soil is also important. If this be such that streets and garden walks dry quickly after rain, you have elements of health ; if they remain long wet, then you have elements of unhealthiness. If the soil be right, then the climate is to be considered. The mere situation of two houses, only half a mile apart, will make all the difference in this, and should be carefully watched. A house sheltered on the south and west, exposed to the north and east, is badly situated ; the opposite exposure is usually good. Plenty

of sun should fall upon the house all day, and on all sides, if that be possible. Yet it must be seen that no hollow or stagnant air be chosen ; it is nearly as bad as stagnant water, for in mild winds, dryness of soil and air, and abundant sun, lie much virtue for health and healing.

Clothing.—Clothing should be light yet warm, and sufficiently free so as not to interfere with bodily movements. The clothing next the skin should, we think, be linen, as being more porous and absorbent than wool (*see* UNDERWEAR). No woman who values her health should submit to any tight lacing. The organs of the body require every inch of space for the proper performance of their functions, and if they are unduly squeezed many serious complaints may result. Besides the skin is a breathing organ, and it is most important that air should readily reach it (*see* TIGHT LACING).

Long trains should not be worn, as they are most effective agents for sweeping up germs of diptheria, consumption, etc. Skirts should not be hung from the waist, but from the shoulders, and should be light in weight. Tight boots and high heels are both to be condemned.

The practice of wearing mufflers, or any tight wrapping round the neck region, is injurious and enervating to this part of the body. The sailor, though exposed to more rough weather than any other class, is free from throat or chest trouble, and can stand both heat and cold better than soldiers. Sailors are, indeed, the only sensibly dressed men in our country. Soldiers, in their tight-fitting tunic and stiff collars, are the worst. They constantly die of heat and apoplexy, when farm labourers doing more work are nothing the worse.

Club Foot.—Children are not unfrequently born with this deformity in one or other of its various shapes. The cause is to be sought in such a defective state of the nervous system as hinders the proper growth of these parts. If the nerves are treated rightly, the limbs will so grow

that the defect will disappear. We speak from positive knowledge of cases so cured.

Treatment must first stimulate the spinal nerves; gentle, continued rubbing on each side of the spine with hot olive oil will do this. Proceed, after some time of this, to rub and knead the haunch, thigh, and leg with the same hot oil. Continue this, gradually descending, until the defective foot is reached and similarly treated. We have known even adults cured in this way, with perseverance. Ten or fifteen minutes of this treatment before a fire, or in a warm room, every night, will do wonders. A skilful surgeon can do much to remedy this, but one *really* skilful should be chosen. *See* MASSAGE.

Cold in the Head.—Infants often are prevented sucking by this form of cold closing up the nostrils. In such a case have a small cap of cotton to fit the head. Wring this out of cold water, and fit it on the child's head. Put on over it a rather larger and thicker cap of the same material. Often the nostrils will open in two or three seconds, and the cold will speedily be cured, if no more be wrong. Observe that the child be *warm* during this treatment. If the case is obstinate, secure good medical aid, for constitutional weakness, or even some deformity of the nostrils, may be present as cause, where the trouble exists from birth.

For adults similarly affected, a towel wrung out of cold water and wrapped round the head, with another *dry* one above, will answer the purpose.

For severe cases, pack the feet and legs in hot fomentation for an hour, and apply a cold towel as above. This last method should always be pursued where the patient feels chilly. Cold in the head may often be checked by use of dilute vinegar. *See* NOSTRILS.

Cold, Settled.—A cold is often easily overcome. At other times it "sits down," as country people say, and refuses to be cured, a hard dry cough continuing for a long

time, and causing sleeplessness and general weakness. In such a case first try to secure an increase generally of vital energy. At night rub the feet and legs with hot olive oil. Pack them for three-quarters of an hour in a good *large* blanket fomentation, open out, and dry well, oil and dry again, put on a pair of cotton stockings, and put the patient to bed. In the morning, place a towel tightly wrung out of cold water all round the back and breast. Cover this well with dry towels, and tuck the patient in, so that he becomes warm and comfortable. In three-quarters of an hour open out, dry the skin, oil it and dry again. Then the ordinary clothing may be put on. The second evening it will be well to pack in the SOAPY BLANKET (*see*). Next morning the towel envelope should be repeated as before. The third evening, put a large BRAN POULTICE (*see*) between the shoulders. While this is on apply cold to the chest, as in treatment for BRONCHITIS (*see*). It is good to take sips of hot water at any time if the cough is troublesome. A teaspoonful of boiled liquorice and linseed two or three times a day has a good effect. This treatment usually cures a pretty severe case.

Cold, Taking.—Where cold is easily "taken," it is the skin which is defective in its action. The cure must therefore deal with it. Even spasmodic asthma can be traced to the failure of the skin to throw off waste sufficiently. Men exposed to great heats and chills, women and children whose nervous energy is small, are liable to this skin failure. Kneipp linen underwear, besides being more absorbent of perspiration than woollens, has a stimulating effect on the skin owing to a certain hardness (by no means unpleasant) of the fibre. Wearing it is an excellent preventive of skin failure (*see* UNDERWEAR). This may also be treated by careful, kindly rubbing over the whole body with warm olive oil, the patient being kept warm during the operation. This rubbing may with advantage come

after a sponging with M'Clinton's soap (*see* SOAP). To face the wintry blast at half-past five in the morning is for many severely trying. This treatment the night before will give immense help to those who are so exposed. It is the best preventive against taking cold known to us.

There is one great difficulty that stands in the way of such a remedy as we have suggested—that is, the "trouble" which it implies, not so much to ourselves as to others. Many a useful life is lost lest "trouble" should be given. It needs to be well understood that this is a temptation. If we can buy a quantity of some drug from a chemist according to the prescription of some medical man, and just quietly swallow it, that "troubles" nobody. So powders to sweat us, and powders to stop our sweating, are readily "taken," greatly to increase all tendency to "take cold." Our relatives and others have, as the fruit of such a system, worlds of serious trouble and loss that might all be saved if only a very little trouble were given in the more natural and reasonable way.

Cold Cloths.—*See* TOWELS, COLD WET.

Constipation.—This trouble is often only aggravated and made chronic by the use of purgatives. Some simple change of diet, such as a ripe uncooked apple, eaten before breakfast, or a fruit diet for a day or two may put all right. So also with the use of wheaten meal porridge or bread. When this can be taken with pure CANE SYRUP (*see*), the two together will make such a change in the food as will frequently banish all inaction of the bowels. Rest must be reckoned on, especially if the patient has been using purgatives freely. Do not act as if castor oil were a necessary article of diet. When the constipation is more obstinate, in the case of a child, good golden syrup may be given, a teaspoonful after each meal. A quarter of a pound of the best Spanish liquorice, costing sixpence, should be boiled in a pint of water down to three-quarters of a pint and strained. A dessertspoonful

of this after each meal may be given instead of the treacle. It is the best tonic we know, and infinitely better than quinine and other costlier drugs. If a stronger mixture be desired, put half-an-ounce of senna leaf in the juice while being boiled. This may be increased to a whole ounce of senna if still stronger effect be desired.

Some are more liable than others to attacks of constipation, but chronic constipation may generally be put down to errors in diet, or want of sufficient exercise. Indigestible foods, such as pastry and heavy puddings, as well as foods which leave little residue in the intestine, such as white bread, puddings, arrowroot, are highly constipating. Tea has also a similar effect, also large quantities of meat. Constipation is seldom found in vegetarians, since vegetables and fruits act as a stimulus to the intestine. Brown bread and oatmeal porridge have also an aperient effect. If it is suspected that milk has been a cause of constipation in any particular case, it may be boiled and used with coffee instead of tea.

Much may be done by judicious exercise to relieve chronic constipation, and help the liver to work (*see* APPENDIX, PHYSICAL CULTURE). Deep breathing will also affect the intestines and urge a motion. Bathing and massage of the abdomen are also useful (*see* MASSAGE). Clothing should be light and loose, tight lacing being a frequent cause of constipation.

Every effort should be made to keep the bowels regular, as protracted constipation leads to many painful affections, such as headaches, piles, and even inflammation of the intestine, the various products of putrefaction being absorbed and carried through the blood stream. A daily motion should invariably be solicited at a regular hour. On rising, before the morning bath, is a good time, though some prefer just before retiring to bed, and more, probably, go immediately after breakfast. The great thing is to get into the habit of going daily at a fixed time;

nothing should be allowed to interfere with this, and it is highly desirable that children should be accustomed to this habit. Parents should, therefore, see that the schools selected have sufficient closet accommodation, as schools in private houses often have but the one closet for a large number. As a result of this restricted accommodation, the habit of using aperient medicines is acquired with *very* injurious results, for if the call of nature is neglected the desire passes away, and constipation is inevitable. It soon comes to be a settled condition and will often be the cause of life-long ill-health. The evils from the formation of such a physical habit will far outweigh all the so-called accomplishments that may be acquired.

Hot or cold water taken in sips throughout the day has often proved a most valuable cure for constipation.

When artificial means are required to move the bowels, an enema is much to be preferred to drugs. The way to administer it, so as to be most effective, is as follows: Use a fountain enema holding three quarts. Put into it two or three quarts of water as warm as can be comfortably borne. A teaspoonful of salt added to the water will make it more effective, or soapy water may be used, made from M'Clinton's soap. The fountain should be hung up as high above the patient as the india-rubber tube will allow. The patient should lie on the right side, with knees drawn up. The tube should then be introduced into the rectum, and should be three or four inches in. The water may then be turned on with the thumb valve. If the abdomen can be rubbed by an attendant in an upward direction it will be better. The water should be retained, if possible, twenty minutes or half-an-hour.

A HOT FOMENTATION (*see*) over the liver, before using the enema, will make it more effective.

A bulb enema syringe may be used instead of the fountain, and less water—a pint or even less, and the water tepid or cold, may be preferred by some. The disad-

vantage of a bulb syringe is however that sometimes air gets in along with the water, causing pain and discomfort.

Consumption, Prevention of.—This most insidious and deadly disease is caused by a tiny vegetable growth derived from persons or animals already suffering from tuberculosis. The spit of consumptive patients swarms with such germs, and when it dries and becomes dust the germs may be stirred up and breathed, or may mix with food, *e.g.*, milk, and so enter the body. A dried handkerchief may also carry the infection.

But these germs, though continually carried into the lungs of almost all, do not develop in all. The healthy body can resist them, and it is only in the body which possesses little resistance, owing to a low state of health, that they take root, and so start the disease.

Want of pure air, such as is caused by badly ventilated rooms, dark, damp, and dirty houses, want of good food, or bad food, alcoholic drinks, frequent illnesses, dirty habits, are powerful causes in producing this low state of health, which is so favourable to the growth of the consumptive germ. Therefore we insist on fresh air, especially for children in schools, for employees in factories, for clerks in offices. All places of public resort should be provided with proper ventilation. The breath from the lungs is loaded with poisonous organic matter, and if continually re-breathed poisons the blood. The smell of a room is often an indication of whether the air is pure or not, especially in the nostrils of one entering from the outer air. Let all windows be kept open day and night, and let fresh air and sunlight continually flood the room. Nothing will kill disease germs quicker. Avoid choosing a residence with but little open spaces around, such as basement tenements and back to back houses. Have an open fireplace in the room. Gas or oil for lighting, heating, or cooking renders the air impure, and in need of constant renewal. *See* Air.

Dirt, either in the house or around, poisons the air, and refuse should be removed to a distance from the dwelling. Tea leaves should be sprinkled on floors before being swept. Remove dust with damp dusters, which should be boiled. Cleanliness should be strictly attended to, and schools and factories should be plentifully supplied with soap and water.

The food consumed by the vast majority of people is far from being as nourishing as it should be. Tea and white bread have replaced porridge and milk. This should not be. Cocoa might with advantage replace tea, and porridge and milk by itself would make a highly nutritious meal (*see* articles on DIET).

Stimulants are not required by the healthy body, and intemperance is a fruitful predisposing cause of consumption. Skim milk is not a suitable food for the young. *See* INFANTS' FOOD.

Infectious diseases, such as Typhoid and Scarlatina, are frequently conveyed by cow's milk. There is also reason to believe that in certain cases of Tuberculosis the infection has been conveyed by milk from tuberculous cows. These risks can only be absolutely avoided by sterilising the milk, *i.e.*, by placing the jug in a pan of water and bringing the water to the boil, keeping it so for twenty minutes. If the milk is kept covered, and rapidly cooled by placing in another pan of cold water, but little boiled taste will be felt. Sometimes, however, sterilised milk disagrees with an infant; if so, the strictest watch must be kept on the history of the milk used.

It should be remembered that this disease is not hereditary. It is only the delicacy of constitution predisposing to the disease that is inherited. This delicacy may, especially in childhood, be remedied. We have known hundreds of tender children made strong by liberal daily MASSAGE (*see*). In all cases where hereditary weakness is feared this should be resorted to. In many cases nothing

more is needed to banish consumption out of families than the stimulation of the skin by this massage. Wearing linen underwear (*see* UNDERWEAR) also assists in this direction and prevents chills. As it is of prime importance to increase the chest capacity, and this is most easily done in youth, great attention should be paid to chest expanding exercises (*see* APPENDIX) and deep breathing. The cultivation of singing will greatly help.

Consumption, Treatment of.—Turning now to the case when consumption has actually shown itself, the above treatment is exactly the course to be pursued. But we would emphasise the fact that unlimited fresh air and good nourishing foods are the only cure. If the patient can afford it, it is best to go to one of the Sanatoria for consumptives in order that he may see how the fresh air cure is practically carried out. It means simply breathing every mouthful of air as pure as it can possibly be obtained. Sleeping out in a hut, with the side completely open, and with protection only from the rain, with abundance of clothing, and, if necessary, hot-water jars to supply the required heat, is strongly recommended, and every hour of the day, as far as possible, should be spent in the open air, reclining or taking gentle exercise.

The food should be nourishing and abundant. Plenty of milk, butter, and eggs should form the basis of the diet. The strictest precautions should be taken against spreading infection, and the patient be made to understand that these measures are intended not only to protect the public and his friends, but to allow of his social intercourse with them, and to assist his own cure. The source of danger being the spit, it should be collected in a pocket spittoon or piece of paper, and be destroyed before it has time to dry. Spitting on floors or elsewhere is highly dangerous. The spittoon should be boiled carefully. A consumptive should not swallow his phlegm, as the disease may thus be conveyed to parts of the body not already infected.

Kissing a consumptive person on the lips is attended with risk, and consumptive patients should not wear a heavy moustache or beard, as the phlegm drying on the hair is a source of danger.

The bed on which the consumptive lies should not be in a corner, but out from the wall, so as to admit of cleaning and ventilation. Curtains and carpets are dust catchers; reduce the amount of such articles as much as possible. In the event of a death from consumption, the room occupied by the invalid should not be used again until it has been thoroughly disinfected. The Public Health Authorities are usually ready to carry out this work. If not, the floor and woodwork should be wiped with damp dusters, and then scoured with soap and water. If the walls are papered, the paper should be well damped, stripped off, and burnt. If the walls have been whitewashed, this should be renewed with limewash, containing a quarter of a pound of chlorinated lime to the gallon of limewash. The quilt, pillow case, blankets, and sheets of the patient's bed should be steeped in boiling water and then washed.

Often consumption is associated with wasting sores on the neck or other parts, which are extremely difficult to heal. These should be soaked in warm weak ACETIC ACID (*see*) daily, and dressed with olive oil. They may be greatly mitigated, if not cured, by this simple means. *See* ABSCESS; BONE, DISEASED. The directions as to diet in cases of abscess apply also to these cases. Besides such outward applications, the rubbing along each side of the spine should be applied. *See* CHILDREN'S HEALTHY GROWTH. The ARMCHAIR FOMENTATION (*see*) may also be used.

The very rapid pulse, and extreme fever, which accompany advanced and rapid consumption, may often be greatly mitigated by cooling cloths applied over the heart. Sponging over the whole body with vinegar or weak

ACETIC ACID (*see*) also greatly refreshes the patient. It may be done under the bedclothes, so as to avoid all possibility of chill. Cold cloths over the heart and chest, if they cause chilliness, may be accompanied with fomentation of the feet and legs.

The temperature of a consumptive should be recorded three times a day, and if above normal the patient should stay in bed till it is reduced.

When the temperature has been reduced, gentle exercise is very useful. Gradually increasing walks should be taken each day.

Contraction of Sinews.—This often occurs at the knee, bending the joint so that the patient cannot stretch his limb or walk properly. The injury in such a case is usually at the ends of the sinews, where they are inserted into the bone. If the limb be straightened and put up in splints, so as to secure perfect rest, it is well to see that once every twenty-four hours it be removed from its fastenings and treated in some way to obtain a cure. Otherwise the whole limb will harden into a straight and unbendable condition, worse than its original bend. When the fastenings are removed, then, each day, let the limb be rubbed and bathed for an hour. Treat the whole body with soaping and oil rubbing (*see* LATHER and MASSAGE). While bathing the limb it is to be rubbed with this soap, and the lather rubbed gently into all the skin. Rub, after soaping and drying, with hot olive oil. Dry this off, and wrap the limb in warm flannel. With this treatment no splints or plaster jackets are at all likely to be required. The limb usually soon comes right.

Sometimes this contraction affects the hip joint, and causes great distress and lameness. The upper end of the thigh bone is even sometimes drawn a little out of its proper position. For this, the muscles of the back, and specially of the side and hip which is lame, are rubbed with gentle pressure and hot olive oil as often and as long

as may be convenient. Strong fomentations are also applied for half-an-hour daily (*see* ARMCHAIR FOMENTATION). We know of one case in which this treatment has cured such contraction both of the knee and hip joint. Whether the cause be rheumatism or other trouble, or an injury, the treatment is the same.

Convulsions.—For an ordinary convulsive attack in the case of a child, hold the child's head over a basin and pour tepid water (blood heat, 98 deg. F.) over the head. This will usually be sufficient. If not, seat the child in a bath of hot water nearly up to the waist. If bad, indigestible food causes the fit, give teaspoonfuls of hot water every few minutes for some hours. If the case is obstinate, a BRAN POULTICE (*see*) may be put over the lower back, and cold towels gently pressed over the stomach and bowels.

Fits from children's teething are more troublesome. They may often be prevented by placing a compress wrung out of cool water along the spine while the infant is warm in the cradle, and changing it so as to maintain the cooling effect. A handkerchief folded eight ply does very well. Four or five changes may be sufficient. Rub with a little warm oil when the cloth comes off. If the fits do come on, treat as above directed for fits from indigestion.

Cooking.—The cooking of vegetables requires particular care. The valuable salts and other nutritive ingredients they contain are easily dissolved by water, and when they are drained, and the water thrown away, as is usually done, all this nutriment is lost. Double cooking pots are easily procurable for meat, porridge, etc. These are quite suitable for vegetables—cabbage, turnips, carrots, peas, etc. The vegetable should be placed, without water, in the inner pot; it will take somewhat longer to cook than when boiled in the usual way. The outer vessel should be partly filled with water kept boiling. Any

juice which comes out of the vegetable should be served in the dish along with it. It may be thickened with a little flour and butter, or if a regular white sauce is being made, the juice should be used instead of part of the water. If no double boiler is procurable, an ordinary tin can, inside a saucepan will serve very well. Many who consider certain vegetables indigestible, as usually prepared, will find that when cooked in this way they agree with them perfectly. The fact that the colour of cabbage, peas, etc., is not so green as when boiled in a great deal of water, is not of importance, when the flavour and wholesomeness are so much increased. In stews and vegetable soups the salts are, of course, preserved.

Cooling in Heating.—Often it is difficult to get a sufficient cooling effect by means of cold cloths without unduly chilling the patient. When the head has to be cooled, as in the very dangerous disease meningitis, the effect must pass through the mass of the skull before reaching the brain. A large and long continued application is needed for this. The surface is apt then to be overcooled before the interior of the head is affected. In such a case the surface of the head, when the patient feels it too cold, should be gently rubbed, as directed in EYES, SQUINTING, until this feeling goes off. Then the cooling may be resumed. Or if rubbing be disagreeable, a warm cloth may be applied for a short time, and cooling then resumed. In this way a succession of *waves* of heating and cooling can for a long time be sent through the surface, with good effect and no chill. The short heating restores the surface, and does not interfere with the cooling effect reaching the interior parts. The same principle applies to cooling any part of the body (*see* BATHING). Any *deep-seated* inflammation is best reached in this way.

For instance, in the large hip-joints it is of vast importance to reach inflammatory action in parts that are not near the surface, and cold cloths, pressed constantly, pro-

duce distress in the surface, if there is no intermission in supplying them. The patient is apt to rush to the conclusion that he must just yield to be blistered, painted with iodine, covered with belladonna plaster, or burned with red-hot irons! That is, he will yield to be made a great deal worse in every respect than he is, because he is not aware that it is quite possible to cure him without making him worse even for a moment.

Coughs.—These will be found treated under the various heads of Colds, Bronchitis, Consumption, etc., but some particular cases of *mere cough* demand special attention. A tickling cough sometimes comes on, and seems to remain in spite of all efforts to get rid of it. It is worse at night, and keeps the sufferer from sleeping, causing much distress. Where the breathing organs are weak, this cough is caused by an extra flow of blood to them, especially on lying down, the blood acting as an irritant by pressing where it should not. In such cases a BRAN POULTICE (*see*) applied as directed for BRONCHITIS, with cooling applications to the part where the tickling is felt, should soon effect a cure. *See* RESTLESSNESS.

We had a case lately in which these features were very marked. It seemed as if the patient had caught cold and this was showing itself in severe and alarming coughing. The skin was yellow, and there were other signs of failure in the organs that purify the blood. Irritating substances were passing into the lungs because of failure in the liver and kidneys, and not from anything in the lungs themselves. In such cases the cough is merely a way of throwing off everything which ought not to be in the breathing organs.

The remedy is very simple. Let the patient take about three tablespoonfuls of hot water every ten minutes for four hours. Before these four hours are expired, the substances causing irritation will be so diluted that they will cease to irritate, and the organs failing to do their duty will be in full working order.

Cramp in the Limbs.—The treatment of this is to apply cold cloths to the roots of the nerves which govern the affected limb or limbs. For the legs, the cold is applied to the lower spine; for the arms or hands, it is applied to the upper part. The limbs affected should also be rubbed briskly with the hands, or a rough towel. Often the irritating heat causing the cramp is in but a small part of the spine, and the whole body is cold, or at least too chilly to make the cold cloths a pleasant cure. In such a case FOMENTATION (*see*) of the feet and legs will supply sufficient heat to make the cure by cold pleasant and safe.

Cramp in the Stomach.—This very severe trouble, though resisting ordinary methods of treatment, is not difficult to cure by right means. If help is at hand, the patient may be placed in a shallow bath, and cold water splashed with a sponge or towel against the back. A bad case has been cured with two minutes of this treatment. After it, the patient must be well dried and put to bed.

When help is not available, a substitute for the cold splashing is a thick cold compress, the length of the spine, which must be laid on the bed, and the patient lie down on it. This must be changed when it grows hot, and a few changes usually give relief.

Persons who are suffering have often very strong prejudices. For example, one who has decided most firmly that he "cannot do at all with anything cold," is suffering from cramp, and nothing but cold will relieve him, but you must not even hint at any such application. You must in such a case consider how this prejudice took its rise. You will probably find that cold has been unskilfully applied to this patient, and bad effects have been produced, not by the cold, but by its unskilful application. For instance, in a case of cramp the irritation and excess of heat may be both confined to a very small space, no more than that which is filled by the root of one nerve; the rest of the body may be cold rather than hot.

There is need first that this general cold should be dealt with, and a general heat produced by some means or other. This is usually best done by packing feet and legs in a hot blanket fomentation. But this again is not an easy matter when cramp prevails. If you move the limbs in the least the cramp comes on, and the patient screams with pain. Still, you need not be defeated; you can let the limbs lie, and heat them from above by placing the hot blanket over them as they lie. As soon as you get heat raised in the body generally, by some such means as this, you are safe enough to apply all the cold that is needed. That may be so little that a common pocket-handkerchief will be enough. This wrung out of cold water, and folded so as to cover about three inches square of the lower part of the spine, may be gently pressed. If this is really well done, there will be no shivering from the cold, and there probably will be a cessation of the cramp. The one thing wanted is that the cold cloth shall be placed right over the root of the nerve which is irritated, and consequently overheated. The prejudice is thus overcome, and it is seen that cold is not to be absolutely avoided, because it has been once or twice, or many times, wrongly applied.

To prevent the cramp returning, means must be adopted to increase vital energy in the system. Entire mental rest for an hour after meals must be taken. If the patient says "I cannot get this," then he simply will soon have to give up all work, and perhaps narrowly escape a departure from this working world altogether.

Each morning before rising, the compress should be applied as above for a short time; the back should then be rubbed with hot olive oil before dressing. This treatment, and proper rest, will prevent return of the cramp. If the patient falls asleep on the compress, allow this sleep to continue unbroken: it is invaluable. So also is the avoidance of all anxious thought, which is best secured by complete trust in a loving God and Saviour.

Croup, Less Serious Form.—The less serious croup proceeds from a nervous closing of the windpipe, the attack being brought on by any causes of irritation in the nervous system. In this case, when the fit reaches a certain stage, the throat opens, and breathing proceeds as usual. This croup is a cramp of the windpipe ; the cramp is caused by an irritation of the nerves controlling it, which are already in a condition to be easily irritated. The cure is to apply cooling cloths to the spine. Take the child warm in bed in the morning, and rub the little back with warm olive oil. Ring out a towel of *cool*, not quite cold, water ; fold this into a narrow compress, and place it along the spine ; place a dry towel above it and wrap up warm. Change for a fresh cool towel in two or three minutes. If the child falls asleep on this, leave him till he wakes voluntarily. Rub the back again with oil before dressing. The cooling may continue for an hour or so. If this treatment fail, the child may be given medicine to produce vomiting, which frequently relieves. Before putting to bed at night wash the child all over with plenty of M'Clinton's SOAP (*see*), dry and rub over with warm olive oil. Continue this treatment for some days.

Croup, More Serious Form.—This is caused by an accumulation of material in the windpipe, which is coughed up in pieces of pipe-like substance, and which, if not removed, threatens suffocation. For treatment, first give sips of hot water (distilled water is best) frequently. We have seen only five teaspoonfuls of this taken by a child followed by the throwing off of such a quantity of matter from the throat as had nearly caused suffocation. The further treatment is the bran poultice between the shoulders, and cold cloths on the chest, as prescribed in the article on BRONCHITIS. These may not cure in all cases, but will do so in many apparently otherwise hopeless. The moment the symptoms are perceived, treatment should be begun, as this disease is very rapid in its progress.

When an actual attack of croup of this kind comes on, and is severe, it is usual to put the child in a warm bath. If the water is a little below blood heat, and laved on the back, this will go far to relieve; but it will not have a tenth of the effect which a cold towel will have, if placed along the spine. It is indeed wonderful how spasms and the various forms of cramp give way to this. When a little warm olive oil is first rubbed on and then off, there is no danger of cold or of any bad effect (*see* CRAMP IN STOMACH). If this croup is obstinate, there may be more serious disease of the throat, and good medical advice should be had.

Cures Losing their Effect.—After a fortnight's treatment often matters seem to come to a standstill in a case, and then the attendants are apt to despair. Such a state of things indicate only the need for some change in treatment, or perhaps for a rest from treatment for some days. Common sense must guide, and the case may be more keenly looked into: it may have changed its character in the time that has passed, and different treatment require to be given. It is well not to give up until all has been tried which in any way seems likely to suit the case. All the various articles bearing on it should be carefully read and pondered, and no doubt the way to change the treatment will open up. *See* CHANGING TREATMENT.

Cures, as Self-Applied.—Often young people in lodgings are in difficulty for want of some one to apply the necessary treatment in their own case. It is often, however, possible to treat oneself quite successfully by exercising care and common sense. Help should always be got if possible, but where it cannot, it may be done without. In the case of applying cold cloths to any part, when it is necessary to change these frequently, a basin of cold water may stand by the bedside so that the patient can wring out towels without getting up. A still better plan is to have several towels wrung out to begin with—

these may be hung over a rail or chairs until required. When the first has been heated it must be hung over the rail or chair so as to be as much spread out as possible. Evaporation will then cool it sufficiently to be used when its turn comes again. Each towel is to be treated in a similar way in turn. Four towels will give an hour's cooling with very little trouble in this way. So a bran poultice may be prepared and laid on the bed, so that one can lie down on it, and with the cold towels handy, as above, most effective treatment given. Common sense is the guide here, as everywhere in our treatment, and a little thought will solve difficulties at first apparently insoluble.

Damp Beds.—An ordinary bed which has not been slept in for some weeks, although perfectly dry to begin with, will *become* damp, even in a dry house, and, unless properly dried, will be a great danger to its next occupant. This is a preventable danger, and all who entertain guests should see that they are not exposed to it. Many a fatal illness is due to the culpable carelessness of those who put a guest into such a bed. Ignorance in such a matter is shameful. All who have charge in a house should fully understand their responsibility in this matter.

But if you are put into such a bed it is infinitely better to rise and dress, and make the best of a night of discomfort, than to sleep among the damp. If, however, you have so slept, and feel the bad effect, the best cure will be the SOAPY BLANKET (*see*). If this cannot be had, a good hot footbath, with the heat kept just comfortable for half-an-hour or more, will do very well. This should be done at the earliest possible moment.

It will add greatly to the efficiency of such treatment if hot water can be had to drink in small quantities, and often. A few drops of cayenne "tea" in the water will act as a gentle stimulant. Old-fashioned folk place great confidence in a "hot drink" in such a case. This is all very well if they only keep the alcohol out of it: that

destroys vital resources, but never supplies them. We have known cases in which all power was lost through a single night in a damp bed. Possibly in these cases it might not have been easy to restore the lost vitality by any amount of treatment; but we rather think that a speedy application of genial heat all over would have restored it. In some apparently hopeless instances it has done so.

Deafness.—*See* HEARING.

Decline.—*See* CONSUMPTION.

Declining Limb, A.—*See* LIMBS, DRAWN UP.

Delirium in Fever.—The best way of treating this truly distressing symptom is by cooling and soothing applications to the head. We have seen in one case large cool cloths applied to the head for some time every three hours or so. An almost immediate cessation of the delirium followed this application, and it only returned a few minutes before the time for the next cooling. If the pulse becomes rather slow than rapid, and the body rather cool than hot, while delirium still continues, then hot cloths may be applied to the head. When either hot or cold appliances are removed, rub olive oil into the roots of the hair, and dry off.

An excellent treatment is also to cover the whole head with soap lather. *See* HEAD, SOAPING.

It is to be noted that the state of the patient determines the treatment. If he is hot, cold treatment is required. If he is cool or chilly, then give the warm treatment. If he *changes* from hot to cold, then alter the treatment accordingly.

In some diseases delirium occurs, not because of fever, but because of poisonous elements in the blood supplied to the brain. This is the case in liver and kidney troubles, when waste products are not got rid of by these organs as they should be.

To get these organs to work, the best thing is to drink half a teacupful of hot water every ten minutes for two

hours at a time. Do this once a day for two days. Probably it will cause purging, but that is part of the cure. If the case does not yield in any way to this, a large hot bran poultice should be placed over the whole of the *right* side under the arm, from the spine right round to the breast-bone (*see* BRAN POULTICE). This should be renewed if necessary, so as to keep up the heat for an hour. Next day place a similar poultice over all the lower part of the back, so as to help the kidneys and bowels. Dry after these poultices, and rub gently with warm olive oil. The delirium will usually yield to a few days of such treatment. We have seen the reason under such treatment return with a rapidity that astonished the medical attendant. He had given the patient three months to gain what was complete in less than one. *See* FEVER.

Depression.—This is usually a bodily illness, though often regarded as mental only. It appears in loss of interest in all that otherwise would be most interesting. A mother loses interest in her children, a man in his business, and so on. Students, and children overpressed at lessons, are apt to suffer from it. It is simply the result of a drain of energy from the system, until the brain has an insufficient supply. Those who have the care of the young would do well to watch carefully against this state coming on. If it appears, all work should be given up, and as much play take its place as possible. No cramming of ideas into a weakening mind can ever be equal to the possession of health and energy, as a preparation for life.

Treatment should be such as to restore energy. The whole back should be fomented with a large blanket fomentation, being rubbed with olive oil before and after. Let this be done for an hour in the morning; in the evening give the ARMCHAIR FOMENTATION (*see*). Carry this on for a week, and then rest for another week, only rubbing the back with a little hot olive oil each night. Cultivate open-air life; sleep as much as possible—eight

hours at least, or better nine. Carefully prepared and easily digested food should be given, and change of company, scene, and climate are most effective helps; but rest from work is the chief matter. *See* RESTLESSNESS and WORRY.

Diabetes.—There are two more or less distinct stages of this serious trouble; the first stage is generally curable, the second stage generally incurable. Yet good natural means of cure will very much alleviate even the incurable stage. The earlier as well as the later stages are marked by extreme *thirst*. This, in the case of some poor sufferers, is enormous. Gallons of water are taken, and the more is taken the more is wanted. But this thirst is not the effect of heat, as fever thirst is. It cannot be quenched by means of cold cloths often changed over the stomach, as fever thirst can. A sufferer in this disease will set a large pitcher down at the bedside to serve for the night, and drink it all before morning; but there is no extra heat anywhere to account for this. The thirst is more like that which is caused by eating very salt food. It points to the character of the juices which are affecting the stomach, and not to any heated condition of the stomach itself. The drinking is a desperate effort to dilute these juices; and, at least by cold water, that cannot be done. A wineglassful of hot water taken every ten minutes for an hour, or two hours, or three, or ten hours, as is felt to be comfortable, will do wonders in the early stages of this disease. This water, when taken at the right heat, at once mixes with the strongly concentrated juices of the stomach, and causes them to be easily managed by that and other organs. It is truly wonderful what this very simple remedy will effect by itself alone. The next thing to be noticed is the excessive hunger. The food, whatever it may be, fails to quell this hunger. Here, again, it is clearly the stomach with which we have to do. When the hunger is developed we should think the case further advanced than when thirst alone is experienced. The hot water

meets this symptom as it meets the other. It is also of the very greatest moment to give right food. Oatmeal and buttermilk steeped together for a time and then moderately boiled, a very little salt or sugar being added, produces a food which we do not expect to see excelled by the most costly that can be got anywhere. Wheaten meal, or barley meal, will do as well as, and perhaps in some cases better than, oatmeal, but these may be chosen according to taste. The chief thing is the ease with which this food is converted into a large supply of the best of blood for all purposes of nourishment. Food containing much starchy matter, as white bread, rice, and all sugar, must be forbidden. To make up for this, an abundance of fat should be consumed. The bowels should be kept open by a suitable diet and exercise.

Now we come to the excessive urinary discharge which is so strong a feature of this disease. The body seems as if it were melting away in this.

We can benefit the kidneys vastly through acting on the liver, as well as on themselves. By a large hot bran poultice over the liver we can add new life to that, and whatever does so tends to benefit the kidneys. After using this large poultice, with plenty of oil rubbed on before and after, say three or four times, place it over the kidneys and use it as often there. If the heat is well kept up for an hour at a time, one poultice a day would do, but, if the patient desires it, twice a day will be all the better. It is good to do the best that can be done with the skin. By means of soap and oil rubbing, and the cleansing effects of diluted acetic acid, very considerable help may be gained. Good can be done by a hot fomentation of the feet and legs to the knees, with oiling after, so as to have these extremities in a comfortable state. Tea, coffee, and sugar *must be avoided*.

Diarrhœa.—Sudden attacks of this, though in a mild form, are very troublesome. An enema of *cold* water is

in such cases often an immediate cure. The first injection may be followed by even an excessive motion, but if a second cold injection be given this will cease. But in more troublesome cases, where the patient is an infant, or very weak, this is not applicable. For such cases, mix equal quantities of honey and lemon juice (one or two teaspoonfuls of each), and add enough boiling water to dilute it for taking. Give this three or even four times a day. It will usually and speedily cure, and is relished by infants.

Often the cause of diarrhœa in infants is the infection of milk by flies (*see* BRITISH CHOLERA), or from dirty feeding bottles. Bottles with tubes should *never* be used. The indiarubber teat should be smelt to see that it is perfectly sweet and clean before the bottle is filled. Unsuitable or too rich food will bring this trouble on.

A tablespoonful of blackberry (or brambleberry as it is also called) jelly may be given—it is a powerful and simple remedy. In adults, a dose of castor oil, with a few drops of laudanum in it, will probably remove all trouble, if it be due to nothing more than indigestible food. Where the cold enema is dreaded, one of hot thin starch, with fifteen drops of laudanum in it, may be used for adults.

Stale vegetable or animal food, also impure water, are fruitful sources of diarrhœa.

The mind has a great effect on this trouble, anxiety and worry are frequent causes. *See* WORRY. A comfortable seat by the fire, and an interesting book, will often relieve.

When the diarrhœa is very serious, use the four-ply flannel bandage. *See* BANDAGE; BRITISH CHOLERA; DYSENTERY.

Diet.—The composition of different articles of food varies. A turnip is not the same as a piece of cheese. It is more watery, and has more fibre in it, and we speak of it as less nutritious. There are, however, in almost all

foods certain chemical substances present which have different duties to perform in the body, and which are present in widely different proportions in the various articles we use for food.

Water is the most common of these substances. Soups, vegetables, fruits, puddings, are largely water. Some foods contain less of it than others, but on the whole a very large, if not the largest, part of all food consists of water. This large amount is needed. Water makes up two-thirds of the body, and nearly two quarts are given off daily in the various excretions and secretions. If enough be not taken the tissues get dry, and Nature indicates her want in thirst.

Another of these substances is *starch*, or its equivalent, sugar. Rice, bread, and vegetables in general, are largely made up of this starchy or sugary substance, which, as it contains a considerable quantity of carbon, we speak of as the *carbonaceous* element in food. This is the substance which goes to feed the muscles, replacing the waste from work done, just as fuel is required for the fires of an engine.

Yet another substance in food is *fat*. It may be animal, such as beef or mutton fat, and butter, or vegetable, as the oils in nuts, in the olive, etc. Fat, like carbonaceous food, also goes to feed the muscles, but both are required in a healthy diet.

Of the first importance, however, is the *proteid* element in food. Meat, milk, cheese, eggs, peas, etc., contain proteid in considerable quantities. Its use is to repair the exhausted tissues themselves. The muscles and nerves get worn out in their daily work, and require rebuilding. This is what proteid goes to do, and from this, its high import in animal economy, is called Proteid (protos—first). Finally, in all natural foods there are certain *salts*, which also build up, *e.g.*, lime, which goes to make up bone. These salts may be seen in the ash of any common vegetable after being burnt.

These four kinds of food substance make up our daily food, and a certain amount of each substance is required to replace the daily expenditure, a proportion which varies, however, under different circumstances. *See* FOOD IN HEALTH.

As the relative amount of proteid, carbonaceous matter, water, and salts, may vary considerably in different articles, we rightly have combinations of food at our meals. A pudding of corn-flour and water contains no building material, hence we add milk and eggs, which do. A meal of meat and cheese requires bread and potatoes, etc., etc.

Appetite is a good test of the amount and also of the particular kind of food required, provided the appetite is in a healthy condition. If a healthy man refrain from carbonaceous foods for a day or so, he feels a great longing for them, a sign that the body really needs them. It is of immense importance, then, that the appetite should not be accustomed to over-indulgence, for then it is no guide in our selection of foods (*see* APPETITE). If disease indicates such over-indulgence, food should be restricted till the appetite is accustomed to a smaller diet. Bilious people, for example, may have accustomed their appetite to desire more carbonaceous and fatty foods than necessary. On the contrary, badly-fed people often require a coaxing of the appetite to eat strengthening foods, such as oatmeal, cheese, and brown bread.

In order to regulate our diet, it is of importance to have some idea of the composition of common articles of food. We get our food, as everybody knows, from the vegetable and animal kingdoms. The majority of the Anglo-Saxon race live on a diet of animal and vegetable combined, but many exclude flesh from their diet. In Southern Asia, for example, the vast bulk of the people rarely, or never, touch meat. The vegetable kingdom supplies us largely with the carbonaceous or muscle-forming food, whereas the animal kingdom is rich in proteid, or tissue-forming food. Much

proteid, however, can be obtained from the vegetable kingdom—peas, beans, lentils, dried fruits, and nuts being particularly rich in it. We should endeavour to cultivate an appetite for these vegetables containing proteid, as it is a great mistake to rely entirely for this element on meat, as so many of our race do. The animal products—such as cheese, milk, and eggs—will also form an efficient substitute for much flesh-food. This simple diet suits both the brain-worker and the athlete, though each will have to make a selection of those foods most required by him. Certainly much animal food is liable to produce kidney disease, gout, and kindred troubles. If we have a tendency to corpulence (and many have this in advancing years), to resort to an exclusive meat diet will produce these troubles. Far better abstain from vegetables, such as potatoes, and from sweet dishes, pastry, etc., and eat largely of the green-leaf vegetables and fruits with the articles of a simple diet which build but do not fatten the body. *See* DIET AND CORPULENCE ; DIET FOR MIDDLE AGE, AND THE AGED).

Fruit is a very useful article of food. The acid helps to keep the blood alkaline (which alkalinity is necessary for the normal performance of its functions). It prevents acidity of the stomach. The dried fruits, such as dates, figs, raisins, are very rich in proteid. Nuts also are rich in proteid and in fat; they require, however, careful mastication. Mills can be purchased cheaply for grinding nuts; the ground meal, either alone or made into a cream, forms a delicious adjunct to stewed fruit.

Green vegetables are a much neglected food. The salts they contain are very useful. They require careful cooking. A cabbage boiled in the ordinary way loses in the water its valuable salts. In case of flatulence arising from indigestion, the use of vegetables may, however, require to be restricted, at least for a time. Some veget-

ables are palatable raw, such as salads and celery. Indeed, raw vegetables have a tonic effect on the bowels.

Bread should never be too fresh, and should be thoroughly chewed. Zwieback (twice baked) can be recommended, especially for those who suffer from indigestion. It is made by cutting bread, preferably wheaten, in thin slices, and putting these in a slow oven till thoroughly dry and lightly browned. Wholemeal bread should always be present on the table, as its use prevents constipation. Indian corn can be made into a number of palatable cakes, and is a very nutritious food. Home-made jam and honey are digestible forms of sugar, but like all sugar foods should be consumed in moderation, especially by sedentary individuals. Condiments should be avoided, the healthy appetite is better without them, and they irritate the stomach.

Regarding animal foods, they are often spoilt by over-cooking, and it should be remembered that when lightly done they are easiest to digest. White fish, tender steak, or juicy joint and cutlet are superior to the oily fish, and kidney, liver, and heart. These internal organs should be avoided, as they contain even more than the rest of the animal certain extracts liable to produce URIC ACID (*see*). Milk, cheese, eggs, and butter are not open to these objections. Cheese is a food very rich in proteid. It requires careful chewing, and may with advantage be grated before use. Buttermilk is a valuable and strengthening food. A generation or so ago the Scotch peasants lived almost exclusively on buttermilk and oatmeal, and were a magnificent type of men in every respect. Whey is a pleasant drink, and may be made a substitute for tea where the latter is prohibited. It is also beneficial for the kidneys. Jellies are a pleasant addition to the diet of convalescents, but have little nutritive value.

We would strongly urge upon our readers the advantages of simple diet. We mean by this the avoidance of all those rich and spiced dishes which are made up in so

many ways to tempt the appetite, of alcohol in every form, of meat to the extent often consumed by the well-to-do, of pastry and such indigestible food as heavy cakes, of fried food in general; and, on the other hand, the adoption of a diet largely consisting of milk, cheese, eggs, butter, cereals, root and green vegetables, fruits, and nuts. It will not be found an expensive diet; on the contrary, it is remarkably cheap; it will give little trouble, for but little cooking will be needed. It may require some little effort at first, and some breakings with social customs, but far less of both than will be imagined. Seeing that a large part of disease is ultimately traceable to a rich and stimulating diet, and to too much food in general, simplicity is imperative on all who seek for the preservation of health. Eat less, eat better (or more slowly, with perfect mastication), eat simpler foods at your meals, eat at these meals only when you require it, and never between your meals. Such eating will ensure good digestion, good assimilation, good blood, and good health.

Diet and Corpulence.—A tendency to obesity should always be carefully checked by attention to diet and exercise (*see* EXERCISE). The fattening foods are those which contain either fat or carbonaceous substances. Carbonaceous substances are found in bread, sugar, arrowroot, puddings in general, pastry, potatoes. The fats, such as butter, cream, and animal fat, should be much restricted in their use. As we have above indicated, however, it is not wise, as many corpulent people do in their efforts to get rid of this superabundance of fat, to make up for their restriction by an increase in the quantity of meat consumed. Cheese, peas, beans, buttermilk, and oatmeal might with advantage be drawn upon instead. At the same time, if the circulation is good it is well with such proteid diet to increase the amount of water drunk during the day, as this helps to eliminate the waste which would otherwise overtax the kidneys. Green vegetables and fruits should form a large part of the diet.

It must be remembered that it is dangerous to strike out at once all fattening foods from the diet; many have injured their health permanently by such injudicious haste, and brought on floating kidneys, etc. Remember, also, that exercise is a much safer reducer of fat than a very great reduction in diet, unless there has been a decided tendency to continually overeat. All alcoholic beverages must be strictly forbidden.

Diet for the Lean.—To a large extent the preceding article will suggest what is suitable here, remembering, however, that regular exercise will be also necessary in order to enable the muscles to increase in size. Green vegetables and fruits should be largely used in addition to the carbonaceous foods, as their FOOD SALTS (*see*) are necessary to keep the blood in a condition to allow of proper assimilation. In the case of nervous and consumptive patients, the more digestible forms of fat, such as cream and butter, are to be recommended. Some thin people do not seem able to assimilate much fat. These cases will do better on a smaller quantity. Remember always that it is not what is eaten, but what is assimilated, that goes to increase the weight, therefore if any particular food is found, after a careful trial, to constantly disagree, it must be accepted that for that one at all events, it is not a suitable article of diet.

Diet for Middle Age and the Aged.—In advancing years when less exercise is, as a rule, taken, a restriction in the amount of food consumed is highly desirable. The increasing corpulence, which often begins to show itself from 30 to 40, is far from being a healthy sign; indeed, is often the premonitory symptom of serious disease. It should be remembered that a lessening quantity of food is required from middle life on. This applies to all the elements of food. It is noticeable that a fat person seldom lives to old age, most octogenarians being thin and wiry,

and almost all attribute their long life to increasing watchfulness over their health, and largely over what they eat.

When a person is young and taking active exercise, a good deal of surplus food can be worked off, and if the excess be too great, a bilious attack tends to prevent any more being taken, for a time at least.

But as we get on in life, the surplus food, if much is eaten, is deposited in various parts of the body as fatty or gouty accumulations. The liver becomes deranged, and loss of health and strength are at once apparent.

It is then, as Sir Henry Thompson has well pointed out, that the fond but foolish wife often does her husband incalculable harm by her efforts to "keep up his system." She urges and tempts him to take more food, fetching him, between meals, cups of beef-tea, soup, or cocoa, when he really would be greatly the better of total abstinence from all food for several days. What we have said about appetite being the best guide applies to the old especially, and if they could but realize what a very small quantity of food is necessary, they would not be perturbed to find that their appetite guided them to eat very much less than at a younger age.

Milk, which is the ideal food for the very young, is for that reason often undesirable for the old, and it is a great mistake for such to drink much of it with solid food.

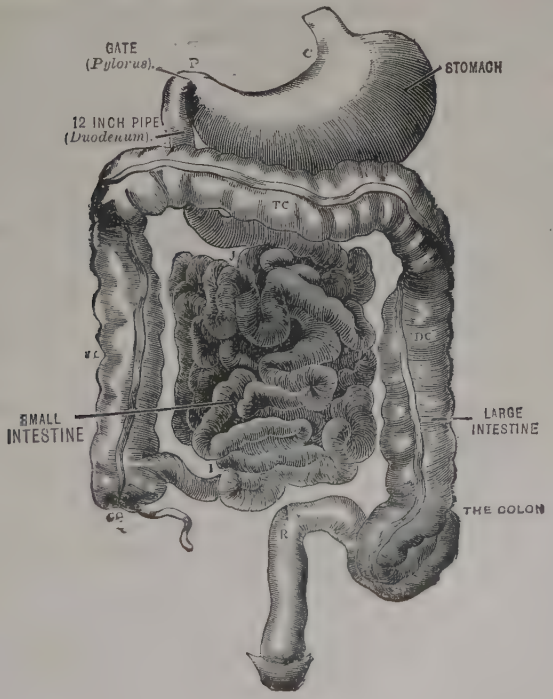
Diet for the very aged becomes mainly a question of invalid diet, and it must be remembered that much should be granted to the individuals choice and liking. All foods for the aged should be light and easily digested, and careful attention paid to proper cooking.

A striking example of lost health recovered and life and activity prolonged to a great age, by strict temperance in food, is Cornaro, a Venetian nobleman of the sixteenth century, who lived over 100 years. He says :—"Our kind mother Nature, in order that old men may live to still greater age, has contrived matters

so that they should be able to subsist on little, as I do, for large quantities of food cannot be digested by old and feeble stomachs. By always eating little, the stomach, not being much burdened, need not wait long to have an appetite. It is for this reason that dry bread relishes so well with me. . . . . When one arrives at old age, he ought to divide that food of which he was accustomed to make but two meals into four, and as in his youth he made but two collations in a day, he should in his old age make four, provided he lessen the quantity as his years increase. And this is what I do, agreeably to my own experience ; therefore my spirits, not oppressed by much food, but barely kept up, are always brisk, especially after eating, nor do I ever find myself the worse for writing immediately after meals, nor is my understanding ever clearer, or am I apt to be drowsy, the food I take being in too small a quantity to send up fumes to the brain. Oh, how advantageous it is for an old man to eat but little ! Accordingly, I, who know it, eat but just enough to keep body and soul together."

Digestion.—Digestion is the process whereby the food we eat is turned into material fit to be assimilated by the blood. It begins in the mouth by the mechanical grinding and crushing of the food, and the chemical conversion of the starchy part into sugar, in which form alone it can be assimilated. This conversion is carried out by the saliva. Hence the necessity for thorough mastication, even of sloppy foods that do not seem to require it, and for attention to the teeth in order that they may thoroughly chew. Alcohol and tobacco, as they spoil the saliva, are very unfavourable to digestion, and should always be avoided. Twenty minutes longer to chew one's dinner is worth a whole box of pills, and no one need expect good digestion who neglects thorough chewing and salivation of the food. This may, with advantage, be increased to an extent which most people would think quite absurd.

It has been proved that when all food is chewed until completely reduced to a liquid, its nutritive qualities are so increased that about half as much will suffice. This is of immense importance in all cases of weak digestion, or indeed whenever an absence of vigorous health renders the economy of vital energy important.



Digestive System.

In the stomach the food meets with the gastric juice, which has the property of turning proteid (*see* DIET for the various substances contained in food) into material ready for assimilation. The walls of the stomach are muscular, and their contraction churns the food with the juice. The gastric juice is secreted by glands embedded

in the walls of the stomach, and is poured out when food is taken.

The whole food, now in the form of a paste, passes into a pipe about 12 inches long (the Duodenum), into which pours the secretion of the pancreas and that of the liver (bile). The pancreatic juice acts upon the starch which has escaped the action of the saliva, and also continues the work of the stomach. It furthermore emulsifies the fat or divides it into extremely fine drops.

The food passes now into a long coiled pipe—the small intestine. This secretes the intestinal juice which further assists the pancreatic juice. Absorption has been proceeding from the stomach onwards (*see* ASSIMILATION). The mass of undigested food is pushed along the small intestine by means of muscles in its walls and passes into the large intestine where a similar process to that of the small intestine goes on, the remains of the food ultimately reaching the vent in a semi solid form, consisting of the undigested part and the débris of digestion.

During this complex process much blood and energy is needed for the abdominal region, therefore hard work or exercise should not immediately follow a meal. It will be noticed that each stage of digestion prepares the food for the next stage *e.g.*, the mouth prepares the food for the stomach. Now, as the food ceases to be under our control when it leaves the mouth, every effort should, as we have said, there be made to prepare the food for its reception by the stomach. Chew food dry as far as possible, for that excites saliva. It is best not to drink till after the meal. The digestive powers often become weakened in advancing years, but may be greatly preserved, and even restored to health after long debility, by careful attention to the above hints.

Drinks made of lemon juice or orange juice and water are often very good to help an invalid digestion, but nothing is better than sips of hot water for some time

before a meal. Distilled water is especially a most valuable drink. Cooling applications to a fevered stomach and warm fomentations to a cold one will often promote digestion marvellously. The feet and legs may be fomented if cold while the cold cloth is pressed over the stomach, especially if the process be long continued. Where heat is necessary it should be gradually and cautiously applied, so that sickening the patient may be avoided. (*See also* ASSIMILATION, FOOD IN HEALTH, INDIGESTION).

Diet, Economy in.—Dr. Hutchison, one of our greatest authorities on the subject of Dietetics, has well said—

"The dearest foods are by no means the best. 'Cheap and nasty' is not a phrase which can be applied to things which you eat. A pound of Stilton cheese at 1s. 2d. contains no more nutriment than a pound of American cheese at sixpence. A given weight of bloater will yield more building material than the same quantity of salmon or sole.

"The upper classes in this country eat too much. The labouring classes are insufficiently fed—much worse fed than their brethren in America. One of the chief consequences is an undue craving for alcoholic stimulants; another is that our poor are not properly armed against tuberculosis and epidemic disease.

"How can this be rectified? Anyone who knows anything about the poor man's budget knows that he already spends as much on food as he is able. As it is, 50 per cent. of a workman's wages are absorbed in its purchase, so that half the struggle for life is a struggle for food.

"The only remedy is to buy the things which are the most nourishing and which yield the most energy. Quite a good diet can be obtained for fourpence a day, yet the average working man spends sevenpence.

"I advise the buying of more vegetable foods, particularly peas, beans, and lentils, and the cheaper varieties of fish. The working classes should also be taught how to cook cheese, and thus make it more digestible, as the Italians do. Cheese contains much building material, and is therefore a valuable article of diet.

"I strongly recommend one good meal of oatmeal a day, instead of so much bread, butter, and tea, which is the staple diet of so many poor families, because it is easily prepared, and because of human laziness.

"Skimmed milk is better than no milk at all, for it contains all the original proteids, and has only lost its fat. More dripping and margarine should be eaten, instead of jam; margarine being quite as digestible and nourishing as butter."

Vegetable oils are, however, more digestible than animal fats. Cocoanut butter is a cheap and excellent substitute for margarine or butter. As it contains no water it will go much further.

Another instance of bad economy is the use of cod liver oil. Butter or even cream are quite as fattening and much more digestible.

Malt extract is much dearer than honey, which is superior to it in value as a food.

To supply a healthy man with the amount of proteid required by him daily in beef extracts would cost 7s., in milk (a comparatively expensive food) would only cost about 1s.

Diphtheria.—The most striking symptom of diphtheria is the growth of a substance in the upper part of the windpipe, which threatens to close it entirely. Good medical skill is of first importance here, yet much may be done where that is not available. We have often seen the swallowing of a little hot water and treacle enable the children to throw up the entire obstruction and make the breathing perfectly free. Mark at once whether the

feet are cold or warm. If cold, oil them well with olive oil, and pack in a hot blanket fomentation to the knees. When the feet and knees are thoroughly warm in this, put a cold cloth on the back of the neck down between the shoulders. Change this as often as felt comfortable. The throat may be brushed out with a weak solution of Condy's Fluid, but a strong solution of common salt will do very well. Good white vinegar and water (*see* ACETIC ACID) is perhaps best of all. We have never seen this fail in changing the character of such growths, and if the windpipe can be washed out repeatedly with it, we should feel sure of a desirable result. Now, we have seen a humble working man's wife wash out the throat of her son as well as any medical man could do it, using Condy's Fluid for the purpose with full success. When you can, have the help of a medical man, but when you are so placed that such help is impossible, you need not fear to try yourself. If there is much fever, cold cloths may be applied to the head to reduce the heat. As the disease is strongly infectious, care should be taken to isolate the patient, and attendants should avoid his breath. Abundance of fresh air and light should be allowed to enter the room, and one window at least should be open as far as possible.

Douche, Cold.—In its most powerful form this is a *solid* stream of water directed down on the patient's shoulders and spine. It may be applied either by an apparatus fixed up for the purpose, or by merely pouring from a watering-can *without* a rose. Its power depends on the great heating in the skin which springs up when it is withdrawn. This heating power again depends on the strong shock given to the system when it is applied. Thus it will be seen that what is called a "Spray" or "Spray Douche" is of little use for the same purpose, as it gives little or no primary shock. It is with this application as with many. The patient's feeling benefit is the

great and true evidence of the treatment being right. When the douche issues in bodily comfort and cheering to the mind, all is right. If it issues in discomfort, then some other treatment must be tried.

"Downbearing."—This expression will cover many troubles especially common among women, where the weight of the internal organs becomes distressingly felt. These are usually supported without our being conscious of their weight at all. But in weakness, or after long fatigue and standing, it becomes felt as a severe downward pressure. This is often caused by the pressure of corset and skirts upon the waist. In cases where it is troublesome, much help will be derived by adopting some device for suspending the clothes from the shoulders. This may quite cure the trouble (*see* TIGHT LACING). For more serious cases, take daily a short SITZ-BATH (*see*) in cold water, with the feet in hot water. Internal syringing is often required, which is best done with the "Fountain Enema," and very weak acetic acid and water (*see* ACETIC ACID). A more powerful application is to have cold water poured over the front of the body while sitting in the sitz-bath, from a watering-can with a garden rose on the spout. This must be done gently at first, and afterwards more strongly and with colder water. This also prevents the troublesome "flooding" from the womb, which so often accompanies "down-bearing." The water employed in the douche must be *cold*, but it need not be icy cold. Ordinary cold tap water does very well. In serious cases medical advice should be sought, as the womb may be displaced. A golden rule for the prevention of this distressing ailment is to pass water frequently. If women would always do this before pushing heavy furniture, hanging up pictures, &c., many internal ailments would be prevented, as when the bladder is empty there is little danger of the womb being displaced.

After the system has been weakened by a miscarriage,

this flooding often occurs. Apply the above treatment: it checks the flooding, and braces the parts.

Drinks, Refreshing.—This is is a matter of great importance to the sick. Nor is anything more important to be said on them than this, that the foundation of all such drinks must be *water*. This water must be *pure*, and is best distilled, or boiled and filtered. Long boiling will spoil water, and half-an-hour is long enough to boil. To add to this pure water, we may take the juice of half a lemon, sweetened to taste. Few patients will fail to relish this. A whole orange may be used instead of half a lemon. A substitute may be made by taking half-a-teaspoonful of good white vinegar instead of the orange or lemon. Also in many cases where the cold drink is not relished, it may be taken warm.

Dropsy.—This trouble is rather a symptom than a disease. It rises from accumulation of watery waste in the body, owing to improper action of the skin, lungs, or kidneys, and sometimes follows scarlet or other fevers and lung affections. By far the greatest danger in such cases arises from fashionable medicines. It is of the last importance that nothing should be given to lessen life by injuring already weakened vital action. It is when this is done by metallic preparations that such cases become very grave and even hopeless. There is a prominent error in connection with all dropsical tendencies, which should be removed. That is the idea that the "water" which collects in such swellings is similar to good drinking water, and that giving the thirsty patient water to drink is increasing his illness. The so-called "water" which swells the face, or the feet, or any other part of the body, in dropsy, is used-up matter such as is, in good health, removed (imperceptibly, in greatest measure) by the organs fitted for that purpose.

Water, especially if given about blood heat, is at once used for most important vital purposes. This hot fresh

water mingling with the poisonous "water" of dropsy dilutes it—renders it not only so much less injurious, but tends powerfully to its removal. The thirst of the patient is in perfect harmony with this truth, as all natural symptoms are ever in harmony with nature. If there are convulsive attacks, they are the result of used-up matter returning into the circulation, and reaching even the brain and central parts of the nervous system. The cure is gained when the defective organs are brought to act well. It is shortsighted action to deal with the kidneys alone in this trouble. They often fail because they are overloaded through the failure of lungs and skin to do their part. First, it is well to act on the lungs by gentle rubbing with hot olive oil between the shoulders and over all the back—done best in a warm room by the fire, or in bed. This may be continued for half-an-hour or more twice daily. The skin may be stimulated by a smart sponging with vinegar or weak acetic acid, and a rubbing all over with soap lather, and afterwards with hot olive oil. This lathering and rubbing to be done at another time from the first rubbing for the lungs. Then apply a large warm bran poultice to the lower part of the back behind the kidneys.

We have often found the following simple treatment effectual, where the patient is not very weak. If there are any signs of heart failure, do not use it. But if the patient is fairly strong, it is most beneficial. You have a case, say, of dropsy in the abdomen: put on two folds of soft flannel, wrung out of cold water; put two folds dry over the moist ones. Keep away all oiled silk and everything of the kind. You will very soon have an astonishing outflow of insensible perspiration, but it passes off through the soft porous flannel without any obstruction whatever. You will find that under this the swelling soon comes down, and even disappears entirely. It is necessary, in such treatment, to renew the bandage so as to keep all fresh and healthful, but your work is abundantly rewarded. In such a case as this the matter to be passed off is so

great that a cotton or ordinary linen bandage may fail, as being too impervious, when a flannel bandage will succeed. A Kneipp linen bandage is perfectly porous, and will not irritate the skin as flannel often does. Worn-out underwear can be kept for this purpose.

If stronger heat seems to be needed, a soft cloth four-ply thick, large enough to cover the whole lower back, should be dipped in CAYENNE LOTION (*see*), slightly squeezed, and placed on the back. Over this a dry cloth should be placed, and the patient should lie down on a bran poultice or hot-water bag for an hour or two. Afterwards the back should be rubbed with olive oil, and a band of soft new flannel worn round the body.

Even if the swelling is caused by rupture this treatment is the best. The rupture must be reduced (*see* RUPTURE) and sustained by a proper truss, for which the patient should apply to a responsible surgical instrument maker. This treatment alone has cured many dropsical patients. Where failure of the heart's action complicates the trouble, this treatment will usually relieve the heart as well as kidneys. For drink in such cases see article DRINKS. For food give whatever is most easily digested and passed into good blood. Wheaten-meal food, oat-meal jelly, etc., are good. *See also* BISCUITS AND WATER.

Drowning.—Many valuable lives have been saved by an elementary knowledge of what to do in the case of one apparently suffocated or drowned.

Commence treatment immediately in the open air, with the face down, neck and chest exposed, and all tight clothing such as braces removed.

The points to be aimed at are—first and *immediately*, the Restoration of Breathing ; and secondly, after breathing is restored, the promotion of Warmth and Circulation. The efforts to restore Breathing must be commenced immediately and energetically, and persevered in for one or two hours, or until a medical man has pro-

nounced that life is extinct. Efforts to promote Warmth and Circulation beyond removing the wet clothes and drying the skin must not be made until the first appearance of natural breathing, for if circulation of the blood be induced before breathing has recommenced the restoration to life will be endangered.

First : Roll the patient over on his chest, with one of the arms under the forehead, when the water will readily leave the mouth. *Second :* If breathing does not recommence then, place him on his face, supporting the chest on a

Turning on the Chest.

roll of clothing. Turn the body gently on the side, then briskly on the face repeating these movements, about 15 times in the minute. (By placing him on his chest the weight of the body forces the air out ; when turned on the side air enters the chest). Five minutes is the longest that can be afforded to this treatment. *Third :* Turn him on his back, draw his tongue forward, keeping it forward by a band passing over it and under the chin, placing the roll of clothing under the shoulder blades. Then, kneel-

ing at his head, grasp the arms just below the elbows, draw them above the head, keeping them stretched for about two seconds. Then turn down the arms and press them firmly for two seconds against the sides of the chest. (The outstretched position allows air to be drawn into the lungs, the other position allows it to be pressed out.)

When a spontaneous effort to respire is observed, proceed to induce Circulation and Warmth. This is accomplished by rubbing the limbs upwards with firm grasp

Arms extended.

and pressure underneath the warm blankets, or over the dry clothing which through bystanders or other means should have been already procured, apply hot flannels, hot water bottles, heated bricks, etc., to the pit of the stomach, the armpits, between the thighs and the soles of the feet.

Allow abundance of fresh air to play about the patient. Administer a teaspoonful of warm water, and then if the power of swallowing have returned, give hot milk,

coffee, etc., in small quantities. The patient should be kept in bed and a disposition to sleep encouraged.

The above treatment should be persevered in for some hours, as it is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance, persons having been restored after persevering for many hours. The appearances which generally accompany Death, are : Cessation of the heart's action, eyes half-closed, pupils dilated, tongue approaching to the inner

Elbows on the Chest.

edges of the lips, lips and nostrils covered with a frothy mucus. Coldness and pallor of surface increase.

Cautions : Prevent crowding, avoid rough usage ; if the body is on the back have the tongue secured. Never hold up the body by the feet. Never place the body in a warm bath, unless under medical direction, and even then only momentarily.

Dwining.—We give this name to a trouble from which we have been able to save some patients, as ex-

pressing best the general failure and weakness which sometimes constitute a serious danger, even where all specific symptoms are wanting. Some cases of this kind we have cured, when they were supposed to be hopelessly dying, by the use of simple soap lather. The skin of the patient is usually dry, and the pulse feverish. In such a case take lather, made as directed in article HEAD, SOAPING, and spread it gently all over the stomach and heart. Repeat this six or seven times, keeping the patient warm in bed. Then, after drying, do the same thing to the back. This does immense good. For the general skin stimulation, rub over with the mixture for NIGHT SWEATS (*see*). The skin is rubbed over with this five or six times, once a day.

Where there is no feverishness, but rather cold feelings, then use the *warm* lather as directed, and rub well all over afterwards with hot olive oil. This treatment alone we know to have cured many.

Dysentery.—This is an affection of the bowels of the nature of diarrhœa, but much worse, as in it *blood* accompanies the bowel discharge. It usually begins as diarrhœa, and at this stage may be cured by either warm vinegar and water or simple cold water injected into the bowel (*see* DIARRHŒA). Where there is any reason to suspect the water supply, that should be boiled for half-an-hour and cooled before use. Attention to the diet, taking for a time *milk* diet alone, is also important. Nothing can be better than boiled bread and milk, giving no more than the sufferer feels he needs. When the diarrhœa has passed into true dysentery, with blood discharge, or the trouble begins as such, then enemas of weak acetic acid, or vinegar and water, given *warm* (*i.e.*, a little over blood heat), must be used instead of cold water. As much vinegar should be used as will make the mixture (*see* ACETIC ACID) very slightly smarting when applied to a tender part of the skin—say, to the corner of the eye. What is wanted

is just as much acid as will act healingly on the injured vessels, and no more. An enema of this water mixed with acid may be repeated as long as required with perfect safety and good effect every time. Even if the disease has made very serious progress, this will tell upon it powerfully. These warm enemas should be very resolutely followed up as long as they give the least comfortable feeling. No one who has not felt their magical effect can conceive how powerful they are. We have seen a patient on the point of giving in and lying down as a helpless invalid made perfectly fit for work in less than an hour by this mode of treatment.

Where the trouble has passed into that stage where the patient is much weakened, in addition to this the ARM-CHAIR FOMENTATION (*see*) should be employed; or if the patient be too weak, the fomentation may be properly wrapped round him in bed without rising. If the patient be too weak for wrapping round the body, he may be first wrapped round the legs, and so strengthened as to stand the stronger remedy. Olive oil must be rubbed on the skin before and after fomenting. The heat may be kept up for an hour. If too weak to stand even this, the feet and legs may be first fomented, and afterwards the body. This treatment has saved many cases from disaster. *See also* BRITISH CHOLERA; DIARRHŒA.

Dyspepsia.—*See* INDIGESTION.

Earache.—In the common form this is purely neuralgic. The nerves are in shape and distribution like some tender plant, the root in the brain or spinal cord, and the ends of the branches in the organs supplied by them with nerve power. They are best affected, and most easily cured, by applications to the root rather than the branch ends. This is greatly the case with earache, which is a trouble of the nerves of the ear—not those of hearing, but the ordinary nerves supplying the part. The remedy

is to press cold cloths on the *back of the head and neck.* This will often give instant relief. It is best done when the patient is thoroughly warm. If he be cold and clammy in feeling, the feet and legs must be well fomented before applying the cooling. Rub all parts treated with warm olive oil when the treatment is finished.

Ears, Running.—In this trouble there is indicated a failure somewhere of the clearance of waste from the body. This matter gathers locally in the ear, where suppuration and discharge take place. A cure must not be directed to the ear alone, but first the general waste-removing system should be stimulated with special reference to its service in the ear. Rubbing the back with hot olive oil and gentle pressure for a long time, say forty minutes daily, will go further to cure the ears than anything which can be done to themselves. Gatherings, by this treatment, are often quickly dissolved and dispersed.

Where actual waste matter runs out of the ear, the treatment is to have a round camel's-hair brush and soak the interior of the ear, using the brush, with warm weak vinegar, or weak acetic acid, just sour to the taste ; then brush with a little fine almond oil, and wipe very gently as dry as possible.

Another way is to syringe the ears very gently with this dilute acetic acid ; do not force the acid strongly against the internal parts of the ear, but rather let it soak in. It may be continued as long as is felt agreeable. Do this twice a day ; have also a good warm bran poultice placed at the back of the head and neck for an hour each day, oiling the skin before and after. This is best done at bedtime. If this treatment be pursued carefully, the ears should soon come right.

Ears, Singing in the.—Partial deafness is often accompanied by noises in the ear, which are very annoying. This is caused by the internal state of the ear, and is often

due especially to the state of the aural nerve. Similar noises are heard also when we place our fingers in our ears, or when we hold a shell or hollow vessel against one of them. In the latter case, what we hear is the rush of blood in the vessels of the ear. In this way, singing in the ears often arises in the course of the treatment recommended in the last article for running ears. If it become too loud, a cessation of the heating at the back of the head, and a brief cooling application, will relieve it. Therefore, in such cases, it is well to use COOLING IN HEATING (*see*).

Eczema.—Skin eruptions, known under this name, have very various causes. Treatment must vary accordingly.

Where the cause is a failure of the skin to act properly, the *whole* skin of the body, especially the chest and back, will be dry and hard. In this case apply SOAPY BLANKETS (*see*).

If the soapy blanket be too severe on the patient, then apply general lathering with M'Clinton's Soap. Use a badger's-hair shaving brush, and have the lather like whipped cream with *no free water* along with it. We have known a few of these applications cure a case of long standing.

Where general debility is present, along with the disease, use all means to increase the patient's vitality. Simple diet is best (*see* DIET, SALTCOATS' BISCUITS, BARLEY, ASSIMILATION, DIGESTION), and abundance of fresh air, within and without the house, by night and by day.

Where the disease results from a parasite, some ointment should be used, and is best applied under the immediate direction of a specialist in Diseases of the Skin.

Elbow Joint.—*See* ARMPIT SWELLING and BONE.

Enemas, Cold Water.—Prejudice often exists against *cold* treatment of any kind, but it must be overcome,

unless the sick would lose some of the most precious means of relief which we possess. The Enema Syringe, or Fountain Enema, may be had from any druggist, and is used to inject liquid into the lower bowel. To inject *cold water* by this means is a most efficient method of relief for internal heat and irritation, as well as for DIARRHŒA (*see*). Sick headaches are also often instantly cured by this means. What we are here concerned with, however, is to say that this remedy is as *safe* as it is simple, so long as discomfort is not felt by the patient. Cold enemas may be given repeatedly, where they are felt to be comforting, without any danger whatever. If the bowels move after the first application, there is no need to be alarmed. Repeat the cold injection, and the diarrhœa will cease. The *cold* enema does not produce or aggravate constipation; on the contrary, it often relieves and cures the sluggish bowels. In cases where medicine has to be almost constantly taken, its use, and the disuse of the drugs, will often effect a complete cure. In many instances in which outward cooling cannot be borne, the thermometer will indicate that there is excessive internal heat, and the pulse will be quick also. In such cases it will be possible to give the most delightful relief by cautiously applied internal cold.

Fever that might be relieved by cold packing and sponging with vinegar, or some such means, will be far more speedily reduced by these cold injections, and fever which cannot be reduced by these means alone will give way when this is added.

There are cases in which a sort of paralysis of the lower bowel renders what is called "opening medicine" constantly necessary. The consequence of these continued doses is to produce greater and greater paralysis, and ultimately death itself; in these cases the cold enema is of great value. If there is lack of power in the bowel, it is well to increase it by a warm bran poultice, or hot

bag on the back, and to brace the vessels and muscles within with the cold enema. (*See* CONSTIPATION.)

Epidemics.—The key to action in case of epidemics prevailing in the district is found, when we consider that always, many residing amid infection escape it. They do so in virtue of better resisting power, rather than because no seeds of disease ever reach them. In case of epidemic, then, besides daily sponging with acetic acid or vinegar, and *scrupulous cleanliness*, everything should be done to increase health and vitality in the household. Plenty of fresh air and sunlight, open windows day and night, and good plain food, are most powerful aids to resisting disease. The milk and water used in the household should all be boiled and *allowed to cool* before use, the boiling lasting half-an-hour. The family where all this is done may expect to escape infection, and therefore may maintain that calmness and freedom from fear which is itself a very important help against it.

Epilepsy.—The first sign of such an illness is a brief and slight attack of "absence." We notice once or twice that the person "loses himself" for a few moments, but recovers so speedily that we scarcely are sure whether anything of importance has occurred. He is perfectly unaware that he has so "lost himself" or been "absent" at all. That part of the brain on the activity of which consciousness depends has been for the moment inactive.

There is another symptom—that is, the "falling" which gives one of its titles to this malady. It is called "the falling sickness." There is a peculiarity in the falling of one who is affected in this way. In some cases consciousness partially remains, but the balancing power of the brain is lost. A patient in this case sees the ground rise till it strikes him violently on the forehead. We remember a friend telling us that he was walking along a railway, when all at once the rail seemed to rise and strike him in the face : he had fallen on the rail, and

seriously wounded himself. The same thing occurs to the person who has taken enough alcohol to deprive him for the time of brain action for the usual balancing of his body. Just as there is a certain part of the brain which gives men consciousness, so is there a part which gives muscular control, such as we use in balancing the body, and there is a stream of vital action flowing from the nerve sources by which both are supplied. If this stream is diverted from these organs, "absence" and "falling" are the natural and necessary result.

There are many cases in which there are only "absence" and "falling," but in others, symptoms much more alarming appear. The next of these which we notice introduces us to a totally distinct element in our explanation. It is found in the "screaming" that follows instantly on unconsciousness, and precedes the "falling" generally. The sufferer is entirely unaware of all that occurs with him, and screams by no voluntary act on his part. The symptom is purely bodily, and expresses no thought or feeling, good or bad, though it is similar to the scream of terror, and makes the same impression on the uninformed hearer. The muscles are used in the scream of epilepsy, just as the muscles of ordinary movement are used in St. Vitus' Dance, but there is nothing of the mind whatever in the movement. The organ of the mind is unsupplied with vital action, but the organs of voice are over-supplied. It is beyond doubt this over-supply which shows itself in the scream, for there is nothing else to account for it.

The same thing is true of the movements of the jaw that are so terribly strong, and so sorely wound the tongue, in the case of those suffering in this way. The jaws open and shut with great force, and without the mind regulating their movement. All the motor nerves are convulsed with strong action, and the muscles they supply are wrought to the utmost, while all consciousness and control are entirely suspended. There is such

an overwhelming supply of activity to the mere muscular system that the sources of that supply are soon exhausted, and the motion ceases for a time. Consciousness does not at once return fully, but the convulsions cease, and something like a sleep follows before the brain has its needed supply.

How is it that vital action seizes these mere motor nerves and leaves the brain? There is a symptom in cases of epilepsy which tends to throw some light on this question. It is seen in the extreme activity of the brain, indicated by the incessant talking of the patient before a series of convulsions come on, when taken along with the extreme depression and silence that follow such a series. During whole nights, even, the sufferer will talk, till every organ is exhausted; then comes a series of violent convulsions, then a season of perfect silence and bewilderment.

This explanation of the disease points to the remedy. That which will nurse the brain, and at the same time lessen nervous force in the system, will tend to cure the evil. Strong fomentations round the lower part of the body may be used. Soap in fine LATHER (*see*) should be made to cover the skin at bedtime, and washed off with weak ACETIC ACID (*see*) in the morning. Easily digested food should be taken, and all so-called stimulants strictly avoided. We should endeavour to secure the soothing of the spinal system of nerves. This is done in a degree that is incredible to those who have not actually witnessed it by a persevering use of the cold treatment of the back. The best time is early in the morning, after the patient has had a good night's sleep. For a whole hour spinal treatment should then be used. We have no faith in any royal road to success in such a cure, but we have faith in common sense and right good work. Taking three towels, and putting two of them in cold water, the "operator" is ready to begin. It will be well first to rub the patient's back gently with a little warm olive oil. This will obviate all danger of shock or shiver when the cold cloth is placed

on the skin. Then wring out one of the cold towels thoroughly, so as to have it damp and not dripping; fold it lengthways eight ply. Put the one over the other, place both on the centre of the patient's back as he is sitting up in bed to receive them, keeping the damp towel next the skin. Adjust these cloths nicely, make the patient lie down upon them, and cover him snugly up with the bed-clothes. So long as the feeling is nice, let well alone. When the towel becomes hot, wring out the second, and change it on the back. Carry this out for a full hour, and if the patient is disposed to go to sleep again, encourage him to do so.

Continued for weeks every morning this humble treatment, without any addition, has an incredibly soothing effect on an excitable system. But it will be well to add to it some nursing of the head and feet, so that every encouragement may be given to a diffusion of nerve action over the body. At night, before going to bed, the feet and legs should be bathed in hot water for a quarter of an hour, dried, rubbed gently with warm olive oil, and a pair of soft cotton stockings drawn on. While the patient is being treated, every possible wearing and irritation of the brain must be avoided, and when lying on the cold towel, the head should be soothingly rubbed by a gentle hand. If an actual violent attack comes on, loose all tight clothes, place a piece of cork between the patient's teeth to prevent biting the tongue, give plenty of fresh air, and keep the patient in a recumbent position.

Everything should be done, by training, to increase the patient's self-control, and all stimulants should be avoided as most injurious. *See* HEAD, RUBBING THE.

It is important that those liable to these attacks should be kept employed. Nothing is so harmful as idleness. Everything tending to good health is of value, but the essentials of the treatment are found in soothing the spine as above, and stimulating the brain by the head rubbing. Unless in cases in which the very structure of the system

has been, so to speak, altered by long-continued disease of this sort, we should look for good results from such treatment as this. Even in the worst cases it would be possible to mitigate the severity of the distress.

A difference in the focus of the eyes often causes a strain on the brain in the effort to adjust them. This sometimes causes epilepsy, and we have known many cases cured by the use of spectacles made to correct this inequality. In all cases of this disease, therefore, an optician should be consulted, to see if there is any defect in the eyes.

Other illnesses are sometimes mistaken for epilepsy: for example, the liver and kidneys in a defective state and impurities passing in the blood to the brain, will explain certain forms of that which passes as epilepsy. It is often easy to cure attacks of this nature by merely bringing the liver and kidneys into working order. If there is a yellowness of the skin, or other signs of the blood failing to be purified in a natural way, then that should first be dealt with, and the fits will often be removed as soon as good action is established in the purifying organs. But in all cases in which there is anything like real "fits," it will be found of great importance to study the over-and-under-actions of the nerve system as by far the most essential elements in the disease. *See* JAUNDICE.

Eruptions—*See* HIVES; "OUTSTRIKES;" SALTROME, etc.

Erysipelas.—This troublesome disease is also known as St. Anthony's Fire, or the Rose. The skin becomes fiery red or even purplish in hue. A violent heat and pain in the part accompany this, and fever and general disturbance of the system follow in a severe case. Swelling of the parts follows, with much distress and danger. *Air* irritates violently the sore parts, and is usually excluded.

In curing the trouble, regard must be had to the cause, which is usually a general failure of strength from over-

work, worry, or some other disease. If a cure is to be effected, *rest* of mind and body is necessary, and must be secured at any possible cost. For local application, the sore parts are thickly dusted with fine fresh flour, and covered with soft wadding or surgeon's lint. The air is excluded, and all is kept *strictly dry*. A waterproof covering over the lint will help this, but is not absolutely necessary.

But, now, is there nothing that can be done to quicken that inner action, the slowness of which has paved the way for all this mischief? This might be done in two ways. After the affected parts, say the face, have been secured in this pack of flour, it will be easy to place a hot blanket, soaked partly, but not at all *wet*, with boiling water, all round the head of the patient. As soon as the heat begins to enter the head, a sense of comfort will be experienced. Care must be taken to keep the *inner cloths dry*, and heat is best given by an indiarubber bag. When this cannot be had, however, the blanket may be used. At intervals, as the patient feels it desirable, this fomentation may be renewed. It will hasten recovery as well as arrest the spreading of the malady, while it will secure such recovery as will not readily dispose to a return of the evil. The feet and legs are likely to be cold. As the sufferer lies still in bed, but not when the other fomentation is on, these should be wrapped in a hot fomentation, allowed to lie in it for a good half-hour, taken out of it and dried, rubbed with warm olive oil, and covered with a pair of soft cotton stockings. If this treatment is at all well carried out, the feeling of comfort given will soon tell how it is working. Of course, if the feet and legs are the parts affected, the fomentation must be applied elsewhere, say on the back, or on the haunches.

Where erysipelas appears in connection with wounds or sores, the same treatment is to be pursued, as far as possible consistent with dressing the sores. These should be carefully cleansed, dusted with boric acid, and covered

with a layer of wadding bandage. The limb should be raised to a horizontal position. Simple food should be given, and the sufferer kept quiet. In all cases of skin trouble, linen should be worn next the skin. *See* UNDERWEAR.

Exercise.—Where this is advised medically, it is often taken in a manner far from wise. For weakly people seeking strength, exercise should never be pursued to the extent of fatigue. Up to a certain point it does good; beyond that, harm. The beginning of harm is indicated by the feeling of weariness. At the same time it must be remembered that what is felt as weariness may be merely laziness. This must be energetically combated. There is no royal road to health any more than to learning.

In some cases this disinclination for exercise may arise from too much or too rich food, and a more sparing diet may remove it. *See* APPENDIX; PHYSICAL CULTURE.

When even walking is out of the question, a kind of exercise may be given by gently massaging the limbs while the patient is in bed. The back muscles should also be gently rubbed and kneaded, so as to cause them to move under the skin, without effort on the patient's part. But no fatigue must be caused. The amount may be gradually increased as the patient can stand it. *See* BRAIN EXERCISE; MASSAGE.

Exhaustion.—Often very serious trouble takes the form of simple overwhelming weariness. The patient's system has been wrought down till it can no longer respond even to stimulus, and life itself seems ebbing away. In such cases treat as for DEPRESSION (*see*), avoiding too energetic treatment, and gradually infusing new life by massage and fomenting.

Expectoration.—What is commonly called a "cough and spit" is sometimes due to some serious trouble of the lungs, and in all cases a doctor should be consulted at once. Often, however, it is due to the failure of the

skin or other organs duly to carry off the waste of the body, which then accumulates in the air tubes. If we get a good revivifying treatment of the skin, such cough and spit will speedily be cured. A mild vapour bath, with thorough SOAPING (*see* SOAP) will usually be sufficient in a slight case.

Sometimes there is a sweating of the skin itself which does not cure expectoration, but which must itself be cured. That is the night or early morning sweating, which is very reducing. It is the insensible perspiration which is needed to remove the spit. Give one good sponging over the body with acetic acid; follow this the evening after with cayenne "tea," afterwards rubbing with warm olive oil. For two or three evenings repeat this treatment. There should then be a loosening of the phlegm, and a lessening of the flow through the lungs. The sufferer may be very weak, and yet these things may be so gently and kindly done, that no fatigue is experienced.

If above treatment does not cure, the SOAPY BLANKET (*see*) may be used once a week, with daily sponging with vinegar or weak acetic acid, and rubbing with warm olive oil. This should cure in a few weeks, where there is no real disease.

Eyes, Accidents to.—Three distinct classes of these are to be considered. They require very different treatment.

When the eyeball is cut or pierced, if the cut be deep or large, a surgeon must deal with it. But if small, a drop or two of castor oil let fall into the eye will often be all that is required. Where inflammation comes on, the tepid pouring recommended below for bad eyes will greatly help. If more severe, the treatment for inflamed eyes may be given. *Perfect rest* and *thorough exclusion of light* are very important.

If the eye is bruised, bathe with warm water, to which a little vinegar or boracic acid has been added. If after

bathing, pain continues, drop in castor oil, and on the outside of the eyelid lay a pad dipped in a mixture of equal parts of laudanum and water. Change this cloth frequently until the pain is relieved.

Treat in this way also for insects stinging the eye.

When the eye is burned, either by sparks or by some burning chemical substance, cold cloths should be persistently applied to the eye. The softest rags or surgeon's lint should be cut up into small pieces that will just cover the eye. Dip these in the coldest water, and press it out a little, so that it will not run off. Place these little bits of wet cloth one after another on the eye or eyes affected. The patient will not be able to endure pressure further than the weight of the cloths themselves. These can be taken off and changed for cold ones as the feeling of the sufferer directs. After a time the cooling will be felt to have gone far enough, and the cloths may be allowed to lie; when they get too warm they can be taken off, or if the heat and pain return they can be renewed.

While this treatment is going on it will be necessary to open the eyelids at intervals, so as to let off the tears that collect in such cases and cause great distress. These will flow out when in the most gentle way you have laid one thumb on the upper eyebrow, and the other just below the lower eyelid, so that you can draw the lids just slightly open.

Eyes, Cataract on.—This disease has been arrested, and in earlier stages even cured, by the treatment described in EYES, FAILING SIGHT. By means of this treatment we have seen a totally blind eye restored in a few weeks.

Eyes, Danger to Sight of.—Where inflammation has gone so far as to lead to suppuration, or even to ulceration of the eyes, there is grave danger of blindness, and this is often the case with infants and children who have been wrongly treated or neglected. In such a case, cease at

once all irritating and painful treatment and drugs. First, wash the eyes by gently dropping over them distilled water, or boiled rain water which has been cooled. The water should be used about blood heat.

After an hour or so, have another warm bathing by means of gentle pouring over the eyes, but do not rub the eyelids. Let there be no friction beyond that of the soft and warm water running over the face in the bathing. Rather have patience till that washes all waste matter away than run any risk of irritating the eyeball. All this time watch what the sufferer evidently likes, and follow his likings—that is, as to warmer or colder water, and so on. It will not be very long before you have thoroughly cleaned the eyes, while at the same time you have infused fresh life into them. To the water used a little vinegar or acetic acid should next be added, or Condy's fluid may be used when it is convenient. But care must be taken that no great smarting is caused. *See* ACETIC ACID.

As the discharge from ulcerated eyes is very infectious, care should be taken not to communicate it to other persons' eyes. Strict cleanliness should be observed, and all rags employed should be burnt, and disinfectants used to cleanse the patient's and nurse's hands, etc. Towels should be boiled for half-an-hour before being washed, after they have been used in such a case.

Now a most important matter must be attended to. Castor oil is the most soothing that can be used with the eyes. Fresh olive oil comes next, but it is usually just as easy to get the one as the other. With a feather, or fine camel's-hair brush, and as gently as possible, cover the eyelids with this oil heated to about blood heat. Do not try to force it on the eyeballs, but if the lids open so much as to let it in, allow it to lubricate the eyeball also. Rub it gently over the eyebrows and all round the eyes, and dry it gently off. Cover the eyes then with a soft covering, and let them have perfect rest.

It sometimes happens that a tiny piece of dust or iron may stick in the surface of the eye, and refuse to be washed away by the tears. Take a square inch of writing paper, curve one of the sides of it, and draw it lightly and quickly over the spot. Never use any sharp instrument or pin. Repeat the operation a few times if unsuccessful,

Diet as recommended in article EYES, HAZY SIGHT.

Eyes, Failing Sight.—This often comes as the result simply of an over-wearied body and mind, without any pain or accident whatever. It appears as an inability to see small distant objects, or to see at all in dusky twilight. The sight is also variable—good when the patient is not wearied, and bad when he is tired. When this comes on under thirty years of age, the eyes have almost certainly been overworked, and need rest. Rest from all reading and other work trying for the eyes is the best cure. If this can be had, it should be taken, with much outdoor exercise. Fresh air is a fine tonic for the eyes. Where total rest cannot be had, take as much as possible, and nurse the failing nerves as follows. Apply the bran poultice, as directed for inflamed eyes, just as long as it is felt to be comforting—with one patient it will be longer, with another shorter. Now there is a cooling of the brow and of the eyes themselves, which is as important almost as the heating of the back of the head. We always find, as a matter of fact, that a cold application opposed to a hot one produces a vastly better result that two hot ones opposed, or one hot one by itself alone. So we find in the case of the eyes. We have now, as we write these lines, eyes under our care that are mending every day by means of a bran poultice at the back of the head and neck, and a cold cloth changed on the brow and eyes. They do not mend anything like so well if heat alone is used. Rub the back of the head and neck with hot olive oil before and after poulticing, and dry well. Do this for an hour at a time, *twice*, or if possible *three times*, a day.

Continue for a fortnight, cease treatment for a week, and again treat for another fortnight. This should make such improvement as to encourage to further perseverance with the cure. Sometimes failing sight follows neuralgia. In this case the rubbing described in EYES, SQUINTING, given twice a day for fifteen or twenty minutes each day, will be useful in addition to above treatment.

Even in cases in which "cataract" is fully formed, we find that the disease is arrested, and the patient at least gets no worse. But where this malady is only threatened the haze soon passes away. We most earnestly wish and pray that this simple treatment should be as widely known as there are failing eyes in this world of trial.

Eyes, Hazy Sight.—Frequently after inflammation, and even when that has ceased, the sight is left in a hazy condition. The eyes may be in such cases rather cold than hot, and not amenable to the cooling applications. The whole system also lacks vital action. First, in such a case, wash the back thoroughly all over at night with hot water and SOAP (*see*). Dry well and rub hot olive oil into the skin until dry. In the morning rub the back for a few minutes with vinegar or weak ACETIC ACID (*see*) before getting out of bed, dry, and rub with warm olive oil. A strip of new flannel should be sewn on the under-clothing, so as to cover the whole back. The feet and legs should be bathed (*see* BATHING FEET) twice a week. All alcoholic drinks, and most drugs, should be avoided, while only such food should be taken as can be converted into good blood. Half a teacupful of *distilled* water should be taken before each meal. The whole of this diet tends to produce healthy blood, which is the great means of dissolving all haziness in the lenses and humours of the eyes.

Every drop of alcohol does so much to reduce that action. We have heard this beautifully described by one of the foremost of living medical men. He began by stating,

what no one can doubt, that a certain quantity of alcohol taken by the strongest man will kill that man as effectually as if he were shot through the head with a rifle bullet. Now a certain portion of alcohol takes a man's sight entirely away. Half that quantity will only render his vision "double"—that is, unfit him to see objects as they really are. Half that again will only perceptibly impair the power of the eyes; but the action of the smallest particle of the substance is the same in nature as that of the largest quantity. Hence that action is to reduce the very efficiency of the nerves of the eye, which it is of such immense importance to nurse to the uttermost. No mere dictum, however strongly expressed, can hold for a moment against this transparent reason. Hence, if a person must take alcoholic liquor, the cure of inflammation in his eyes, and of the thickening of the transparent portions of these organs, is simply out of the question unless the disease is comparatively slight, and his nervous constitution strong.

The very same reason holds good of tobacco. So of opium. So of every other narcotic, whatever it may be called. Hundreds of men lose their eyesight by the use of tobacco alone. We have seen their eyeballs gradually becoming sightless when no change could be detected in their eyes—only the optic nerve gradually lost its sensibility till they were entirely blind. We are perfectly aware that there are those who will scout the idea of such an effect, and prescribe these very narcotics largely in such cases; it is because such drugs are used and ordered that we are compelled thus to reason about them. In all cases of failing eyesight they should be carefully avoided. So should all foods which are not easily converted into healthful blood.

Eyes, Healthy.—Cheap, ill-printed literature is responsible for much eye trouble, and it is well worth while to pay, if possible, a little extra for books well printed,

especially in the case of those who read much. When reading sit erect, with the back to the light, so that it falls over the shoulder. Too fine work, dim light, wrong diet, and want of exercise produce the dull and strained eye, which eventually becomes seriously diseased. Opening the eyes under cold water will help to strengthen them, and massaging the muscles of the eye by passing the finger and thumb round the socket (with scarcely any pressure on the ball itself) will be found of advantage.

Eyes, Inflamed.—For all kinds of burning inflammatory pain in the eyes, the following treatment is most effective. Place a hot BRAN POULTICE (*see*) beneath the back of the head and neck while the patient lies on the back. Press gently fresh cool damp cloths, frequently changed, all over the eyeballs and sockets, so as to draw out the heat. No one who has not seen this done can imagine how powerful a remedy it is. It may also be necessary, if the feet be cold, to foment up to the knees. This last fomentation is best done at bedtime, and the feet and legs should be rubbed with olive oil, and a pair of cotton stockings put on to sleep in, to keep the feet comfortable.

If the eyes are very sensitive the treatment should go on in dim light, as may be felt necessary. The poultice and cold cloths may be used for an hour twice a day. In bad cases, where sight has been seriously affected, a good rubbing of all the skin of the head with the finger tips may be given before the poultice is applied. This rubbing must not be a trial to the patient, but gently done, with kindly good will, and it must be pursued for fifteen or twenty minutes, until the whole head is in a warm glow.

Eyes, Inflamed, with General Eruptions over the Body.—In some cases the eye trouble is only a part of a general skin inflammation, accompanied with heat all over the body, and an acrid, irritating discharge from eruptions on the face and elsewhere, especially on the head. The

cold cloths and poultice will not work in such a case. The chief agent in the cure is fine soap lather (*see* HEAD, SOAPING). Let the head be shampooed with it for half-an-hour. The whole body should then be lathered and shampooed for a short time in a warm bath ; this is best done at bedtime. Much water is not needed ; warm soapy lather, well rubbed all over, is what is required. Ordinary soap will make the skin worse ; only M'Clinton's will do to soothe and heal it (*see* SOAP). If white specks show on the eyes, the treatment in article on EYES, DANGER TO SIGHT OF, will cure these. When this complaint is obstinate and refuses to heal, medical advice should be sought, as blood poisoning is probably present.

Eyes, Paralysis of.—The partial paralysis of the muscles of one eye produces double vision, so that the patient sees two similar objects where there is only one. This double vision is often, however, the result of stomach derangement. If so, it may soon pass away. The true paralysis is more persistent. To cure this, rub the entire skin of the head gently and steadily with the hands and finger-tips (stroking always *upwards*) for some fifteen minutes. Then apply cold cloths to the eyes as already directed. If the cold cloths are uncomfortable, hot ones should be tried. Do this for fifteen minutes also. Continue alternately for an hour twice or three times a day. We have known one such day's treatment remove the double vision *entirely*, and no relapse occur, but in most cases the treatment must be persevered in and returned to until the paralysis is overcome.

Eyes, Spots on.—These spots are of two different kinds, and yet they are very much the same in nature and substance. What is called "a cataract" is of a different character. We refer not to this, but to the spots that form on the surface of the eyeball, and those that form in the membrane of the eyelid. When inflammation has gone on for some time on the eyeball itself, portions of

whitish matter form on the glassy surface and soon interfere with the sight. When inflammation has gone on in the eyelid, little knots like pin-heads form, producing a feeling as if sand were in the eye. Afterwards these knots grow large and swell the eyelid, and at times the matter in them grows hard, and seems to take up a lasting abode in that tissue. Strong and destructive liquids or powders are sometimes applied, that so affect the whole substance of the eye as to cause blindness. Nothing of this nature is required at all. First, the skin of the head must be dealt with. You will find that this is hot and dry, and somewhat hard on the skull. Rub this gently with the dry hands for a few minutes, then press a cloth tightly wrung out of cold water all round the head. Rub and cool alternately for half-an-hour or more if it continues to produce an agreeable feeling. When the head is all soothed, and good action has been secured, at least on its surface, begin with the eye itself. The same treatment is required for both classes of cases. The eye will be shut at first. You take a fine camel's-hair brush, such as is used by artists, and some vinegar or acetic acid, so weak that you can swallow a portion of it without hurting your throat. This is a very good test of strength for the acid. You carefully brush over the outside of the eyelids and all round the eye with this weak acid. This must be done most carefully and patiently for a length of time, till all sweatiness is washed off, and a fine warm feeling is produced by the acid. The matter softens and breaks up, so that it begins to pass away. We have seen a little ball of hard white matter break up and come away after a single brushing carefully done. When the matter is in the eyelid, and is so situated that you can brush over it in the inside of the lid, it is well to do so; but this operation must be gently and carefully done. When you have brushed with the acid long enough, dry the eyelids and cheek carefully, and rub with a little fresh olive or almond oil. It will be well to cover the eye from the cold,

and from any dust that might irritate. You will soon find that it is as clear and sound as could be wished.

Eyes, Squinting.—Various affections of the eyeball muscles cause this. To cure it is often easy, sometimes very difficult. The method of treatment is to stimulate all the nerves of the head and face, and at the same time to soothe their irritation. This is accomplished by massaging the brow and entire head. It must be gently and soothingly done. The open hands are drawn upwards over the brow from the eyebrows, the rubber standing behind the patient. Then both sides of the head and the back of the head are stroked similarly. After this the whole head is rubbed briskly with the finger-points. This should be done often, even four or five times in the day. If the patient objects, it is being unskilfully done; the right sort of rubbing is always pleasant. A squinting eye has been cured in a few rubbings, where the case was a simple one. If the head becomes very hot, it may be cooled as directed above for CHILDREN'S SLEEP. Squinting may be produced or increased by that state of the stomach and bowels in which worms are bred.

Face, Skin of.—To secure a healthy appearance of this is worth much trouble, and any eruption or unhealthy redness is a great trial, especially to ladies. To cure and prevent these, it is usually necessary to look first to the *diet*. A disagreeable redness of the nose, and pimples in various places, is the common result of too much rich food, not to speak of alcoholic drink, which is always most injurious to the face skin. The use of corsets is another fertile source of this trouble, and many in their desire to improve their figure ruin their faces. Plain, easily digested food is to be taken. Tea must only be used *at most* twice in the day, and should be exceedingly weak. Half-a-teacupful of hot water should be taken before every meal, and everything possible done to promote digestion. The whole skin must be brought

into a healthy state by daily washing with M'Clinton's soap (*see* SOAP); no other should be used for toilet purposes. It is far better than the boasted and expensive "complexion soaps," and can now be had in various forms. Many faces are injured by the kind of soap used in washing. The use of the kind we recommend is remarkably pleasant and beneficial, and a full account of it, and of our motives in recommending it, will be found under article SOAP. If, however, the face will not stand the touch of water at all, good BUTTERMILK (*see*) forms the best wash and cooling application. Also a *cloth mask* may be worn all night, lined inside with soft creamy soap lather. In violent face irritation this last treatment is especially valuable.

For pimples on the face, the general treatment for the skin mentioned above (*see* EYES, INFLAMED) is to be used, especially applied to the skin of the back. The buttermilk wash may also be used, but the best effect comes from the general treatment of the skin.

Fainting.—Fatigue, excessive heat, fright, loss of blood, hunger, etc., are common causes.

The action of the heart is temporarily interfered with, and pallor, a sweat on the forehead, with an indescribable feeling of sinking away, precede unconsciousness.

The first thing to do is to bend down the patient's head till it touches the knees, and keep it there for a few minutes. After he has partially recovered consciousness, the clothing should be loosened, and all tight bands or braces removed. The face and hands should be bathed in cold water, slapping the face with a wet towel. Some stimulant, such as hot tea, coffee, or sal volatile, may then be given.

If there is a wound causing loss of blood, it should be attended to at once.

In case fainting is due to hunger, the greatest care should be taken to give only small quantities of food after recovery, as a large amount may prove fatal.

A sip of cold water, or bathing the face with cold water, will generally prevent a threatened fainting. If there appears any immediate danger of a relapse, keep the patient in a horizontal position for some time.

Persons liable to fainting fits should be careful to avoid extremes of temperature, such as very hot or very cold baths.

Fall, A.—After a fall from a height, where there is no apparent outward injury, there is often such a severe shock to the spinal cord and brain that continued unconsciousness occurs. In such a case, foment the spine at first, to remove the effects of the concussion. This may bring on serious difficulty of breathing, owing to congestion of the spinal cord. This can be removed by applying cold cloths along the spine. If the difficulty of breathing be present from the first, then apply the cold at once. The first effect of such a fall is to deprive the brain and spinal cord of vital force. This must be restored by *heat*. Subsequent effects due to congestion can be removed by cold. The effects of a shock in a railway accident may be similarly treated. Common sense will guide in using heat or cold by watching the effect. Where heat fails try cold. This is the simple rule. It is good also to give the patient some simple purgative medicine, and some warm drink. *Avoid all doses of alcoholic drinks.* We have known the flickering flame of life almost extinguished by a teaspoonful of brandy.

Feeding, Over.—It is well to remember that over-feeding is a relative term. To take more than a weak stomach can digest, is to over-feed, although very little be taken. We give some invalids food every two hours but that food is only two-thirds of a teacupful of milk, mixed with a third of boiling water. In every case we must watch to give the right amount, no less and no more. Every case will require to be considered by itself in the light of common sense. The amount

of food eaten should be just sufficient to supply the body with material to replace that consumed in work, build up its wasted tissues and leave a slight surplus over for reserve store. Anything more is harmful. In youth, if too much be eaten, nature relieves herself by giving the transgressor of her laws a bilious attack, during which there is no appetite, and so the excess is worked off. In later years this safety valve does not work, and the surplus is generally stored as useless fat, impeding the action of the heart or other internal organs, or as gouty deposits in various parts. The Anglo-Saxon race at all events does not limit its diet as we think it should, and Sir Henry Thompson, M.D., has stated that in his opinion more ill-health arises from over-eating than from the use of intoxicating liquor, great a source of illness as this last undoubtedly is.

Temperance in diet is absolutely necessary therefore, if one would be healthy, and the avoidance of stimulating foods, with a restriction of flesh foods especially, is a precept which the great majority of well-to-do people need to attend to.

Bilious attacks, headaches, indigestion, etc., are simply nature's protest against the excess of food being forced upon her, and the natural cure is to severely restrict, or still better, entirely stop the food supply for a day or two. The idea that "the system must be kept up" is a very foolish one; people have lived for forty days and upwards on water alone, and a few days' fasting is a far safer remedy for the troubles we have mentioned than purgative drugs.

Those who have a stomach which quickly rebels against too much or unsuitable food, may, as Sir Henry Thompson says, congratulate themselves on having a good janitor preventing the entrance of what would injure. The man who can and does eat anything, rarely lives to old age.

The perfect appetite which comes from the moderate use of simple foods is a relish which must be experienced to be appreciated.

One way in which the amount of food needed to satisfy the appetite and build up the body may be very largely reduced, is by increasing the amount of mastication. If each bite of food is chewed and chewed until it is all reduced to a liquid state, the amount required will be less than half of what is usually taken, and so much less strain will be thrown on the excretory organs.

Feet, Cold.—Continued coldness of the feet gives rise to many more serious troubles, and should always be attended to. There is no better cure than daily BATHING THE FEET (*see*), followed by rubbing for several minutes, say five, with hot olive oil after drying. Rub briskly, until the feet glow. Put on dry warm stockings, and see that all foot-gear is kept as dry as possible. Another method of curing cold *sweaty* feet is to rub the soles with CAYENNE "TEA" (*see*), and afterwards with warm olive oil. Dry carefully, and wear an extra pair of dry cotton socks or stockings. When the sweating is very abundant and obstinate, there is usually more or less failure in the nerves which keep the skin in order. The feet must then be properly *bathed* (*see* BATHING THE FEET), then dried and treated with cayenne lotion as above.

Feet Giving Way.—Where there is a great deal of standing to be done by any one, the feet sometimes yield more or less at the arch of the instep. This becomes flattened, and even great pain ensues; lameness sometimes follows. Young girls who have to stand much are especially liable to suffer in this way. In the first place *rest must be had*. Wise masters will provide due rest for their employees, foolish ones overwork them. Rest is not against, but in favour of work; work cannot be well done without due rest. The proper rest for feet such as we speak of will be the most easy and comfortable

position. *Comfort* is the test of the right treatment. Bathe the feet in hot water for a good while, using plenty of soap. Rub gently with hot olive oil, pressing any displaced bones into, or near, their place. Carefully avoid giving pain. Massage similarly with oil the whole limb, and also the back (*see* MASSAGE). Do this every day at least once. You may have months to wait, but a sound limb is worth a good deal of patience. When standing is absolutely necessary, strips of strong sticking plaster passed down from above the ankle bones, and round under the instep, help greatly.

Boots are better than shoes, and should be comfortably easy, with low heels.

Fever.—In all fevers, to *cool down* the excessive heat of the patient (*see* HEAT, INTERNAL) is the best process of treatment. This may be best done by continued cooling of the head. Have a towel well wrung out of cold water. Fold it so as to envelop the head. Press it gently to the head all round, changing the place of pressure frequently. Have a second towel ready, and continue cooling with freshly cooled towels perhaps for an hour or an hour-and-a-half. Then leave the last cold towel on, and put a dry towel above it. The next cooling, when the fever heat again arises, may be given, if it can be managed, by placing a cold towel along the spine. Cover this with a dry one, and let the patient lie on it. Change this, though not quite so frequently as in the case of the head. Work *carefully and gently*, so as not to annoy the patient. If ice can be had, it may be put in the water used to cool the cloths. If the feet be cold, foment them in a blanket (*see* FOMENTATION). Keep this on the feet for an hour. There will most likely be great relief with even one course of such treatment. It must, however, be *persevered in* until the fever be conquered. In any case of fever, when a patient is too weak to bear the hot fomentation and cold towels, we would recommend rubbing the feet

and limbs if cold with hot oil, and the stomach and chest, and if possible the back with soap lather. It is well at first to soap the stomach only, and for some time ; and each time till the last it is well to wipe off what you have rubbed on, so that the skin may be as clean as possible for the next. To do this only once is often quite sufficient to soothe, so that the patient falls off into a gentle, natural sleep.

Now, no one need imagine that there is any difficulty in the way of anyone carrying out the right treatment. We have known a young sister who saw her brother brought home in fever. The medical man predicted a long and serious illness, and the necessity of being prepared for all the usual features of such a case. The sister heard all in thoughtful silence, but when the doctor went away she said to herself, "May not I lower this flame ? At any rate I will try." So through the night she so effectually cooled her brother's head that when the medical man came next day he expressed his most agreeable disappointment, saying, "It is to be a very light case after all." So it turned out to be, but it would not have been so but for that brave sister's aid. We cannot but earnestly beseech all who have the opportunity to go and do likewise. Often, especially among the poor, dirt and hot, close air have made the fever room a source of frightful danger to all around. Absolute cleanliness, abundance of pure air, and disinfection of the stools, should always be attended to.

Fever at Night.—Frequently, in illness, a fever sets in as night approaches, and increases toward midnight, passing away during the day. The treatment may be as below for INTERMITTING FEVER.

Fever, Delirium in.—*See* DELIRIUM.

Fever, Gastric.—In this fever, now known as a form of Typhoid, the disease spreads a sort of blight over the nervous centres, and from the first greatly lowers their

power. The patient is too weak to bear the powerful cooling recommended in FEVER; there is also a tendency to prolonged and "low" fever. First of all, in such a case, the feet and legs must be fomented. Watch against burning the patient, but get as good and powerful a heat as possible right up over the knees. Then after about fifteen minutes the cooling of the head may proceed as in fever. Both cooling and heating must proceed together.

We must think of not merely relieving, but of curing the patient, by attacking the poisonous substance where it has lodged in the nerve centres of the bowels. Pure water, with just as much acetic acid or vinegar dropped into it as will make it taste the least sour, should be given in tablespoonfuls (and hot) as frequently as the patient can take it without discomfort. If possible it should be distilled water, or rain water filtered, but certainly as pure and soft as can be procured. There is no drug that can be prescribed that is equal to pure water, and no acid better than common white vinegar. These three things—the strong fomentation of the feet and legs, the cooling of the head, and the dissolution of the poisonous substances by means of pure water, and their counteraction by means of acid in very small strength—will do wonders in gastric fever. The "turn" may be secured in a week instead of three, if these things are skilfully and persistently applied. We should say that the strong fomentation and cooling of the head should not be done oftener than twice a day, and only once if the patient feels too weak for twice. But as a general rule, the person who is ill will wish these things at least twice a day. The sips of water should be given, say in a dozen separate tablespoonfuls at a time, at least thrice a day—oftener if desired by the patient.

For food there is nothing equal to good fresh buttermilk. All alcoholic drinks are damaging in a high degree in such an illness as this. Sweet milk, if somewhat diluted with good water, will do, but there is nothing so good as the buttermilk fresh from the churn.

Absolute rest in bed is necessary, and no solid food should be given to the patient until his temperature has been ten days at normal point. All food given in the illness should be liquid enough to pass through the meshes of a milk strainer. Care should be taken in this matter, as death has often followed the taking of solid food, when otherwise recovery would have come.

Milk should always form the largest portion of the diet, and may be given with arrowroot or oatflour. Beef tea is of little use, and is always to be avoided if there is a tendency to diarrhœa. Plenty of cold water may always be given.

In a community which is visited by gastric fever as an epidemic this fact is striking—only a portion of the people are affected by the visitation. Here is one man who drinks the water which gives gastric fever to another; that water goes into his stomach as it does into that of his neighbour, and passes through his system the same, yet death is the result in one case, and not even sickness or inconvenience in the other. In the latter case the system has the power of resistance, and our aim should be to increase this. Therefore we say by all means look to the healthful state of the lungs and bowels when you have the least reason to fear that bad water may bring gastric fever to you or yours. If there is any tendency to constipation get some liquorice, and boil it thoroughly with about half an ounce of senna leaves to a twopenny stick. Strain well, and let all in any danger have a teaspoonful of this thrice a day. It will do wonders in keeping matters in a good state within. If possible, give a good rubbing all over once a week with hot vinegar, and follow that up with warm olive oil. That will do a great deal to keep things right outside. Take and give more rest than usual to the toil-worn when such danger is near, and have as good food provided for all as is possible. There may be danger in the air, and still worse danger in the water to

those whose vital force has got low, while there is none in either to those whose systems are in good tune.

You are, perhaps, ready to ask if we care nothing about bad water? Certainly; we care a great deal about it, as we do about bad air. By all means condemn wells and streams that are corrupted, and insist on the opening of better ones. Make it a first condition of having anything to do with a place for habitation that it has good air and good water. We are only pointing out the best safeguard when neither the one nor the other can be insured.

In all cases where water is suspected, it should be boiled before use.

There is, in great numbers of persons, both old and young, what may be called the natural aptitude of healing. They are kept back from trying to help because it is regarded as so dangerous a thing to go near fever, and also to interfere where only professional skill is legally allowed. To apply such a remedy as that which we have here sketched for gastric fever is perfectly safe in both senses. No medical man worthy of being regarded will find any fault with it, and there is no danger to either the patient or the person applying it.

The mode we have pointed out involves nothing that may not be easily had by the very poorest. What is wanted is only one or two who shall be Christian enough to care just a little for human bodies as well as human souls, and who shall study such simple and accessible remedies, and be ready to guide their fellow-creatures in a time of trouble.

Fever, Hay.—*See* HAY FEVER.

Fever, Influenza.—This is a slow, smouldering kind of fever. For treatment, pack the feet and legs in hot fomentation over the knees, and apply cold cloths over the stomach and heart, taking care in applying the cold if the patient is weak. In such a case only moderately cool cloths should be used. Carry out these two processes

effectively, and a cure should soon result. Give light food —milk and water, and milk diet generally. Give small quantities frequently rather than a good deal at once.

Fever, Intermitting.—For this the treatment may be given as in gastric fever, and, in addition, the stomach and bowels should be carefully lathered over with soap lather (*see* LATHER). This has a wonderfully soothing effect. It may be spread with the hand over the skin, and fresh supplies gently rubbed on until much of the fever is removed. Some five minutes' lathering at a time is enough —this may be done several times a-day. Carefully dry after it, and let the patient rest.

It will be well to anticipate such attacks by softening the skin when it shows a tendency to be hard and dry. A gentle rubbing now and again with fine lather and good olive oil will secure this. We say lather and oil because, when there is no fever heat, lather by itself is too cooling, but when mixed with a little oil the mixture is comforting rather than chilling, and softens nicely.

Fever, Rheumatic.—This results from severe damp chills, usually following exhaustion from some cause. Its best treatment at an early stage is by heat applied to the spinal nerves. If the trouble be chiefly in the legs, treat the lower back; if in the arms, treat the upper back. The heat is best applied by a large BRAN POULTICE (*see*). A teaspoonful of tincture of Guaiacum may be given before each poulticing, which may be done twice a day for an hour. We have known an illness that threatened to last six weeks cured in one week by this means. Give also teaspoonfuls of hot water from time to time.

Where the trouble has advanced to severe fever, and swelling of the joints, an entirely different treatment is best. Let a lather of soap be made (*see* LATHER), and spread over the chest first, and afterwards gradually over the whole body. After four or five coats of lather have been put on, wipe off with a dry cloth, and proceed to

lather again. We have seen half-an-hour of this treatment, well done, greatly relieve the fever; it was continued twice a day, and in three days the trouble was conquered. Care must be taken not to chill the patient. The soaping can be accomplished with only a small part of the body uncovered at once, and, with proper precautions, the bed can be kept perfectly dry. If a proper liniment is procured and lints sprinkled with it wrapped round the joints, the pain will be wonderfully relieved. But such liniments are only to be had on the prescription of a really good medical man, who will not, if he really seeks to heal, and knows his business, object to our treatment being applied.

Sometimes, after rheumatic fever, one or more of the joints become stiff. This stiffness varies in different cases from an apparently complete solidifying of the joint to only a slight inconvenience in its use. We have seen many such joints, even very bad cases, completely cured by a proper use of *heat* and *massage*. It is, however, no trifling matter to undertake the necessary work, and perseverance is an absolute requisite. Even very obstinate stiffening will *in time* be overcome by frequent and strong fomentation, followed by rubbing with olive oil in such a way as to squeeze gently all the muscles and sinews of the limb, and move them under the skin. This should be followed by *gentle* bending of the joint, back and forward as far as it will go *without pain*. It may need to be done twice a day for many weeks, yet the result is worth even more trouble, when you literally make the "lame to walk" (*see* RHEUMATISM).

Fever, Scarlet, or Scarlatina.—As a first precaution, when an epidemic of this exists, children should be sponged twice a week all over with hot vinegar before being put to bed. This is a powerful preventive. If anything like sore throat appears, bathe the child's feet in hot water until a free perspiration is produced. Dry well,

under a blanket, and rub all over with hot vinegar, then put the patient to bed. If in the morning there is no evident fever, repeat the sponging with hot vinegar, dry well, rub with hot olive oil, and dry again. If the fever definitely develops, place the child in a light airy room, from which all unnecessary carpets, curtains and furniture have been removed. No one should enter this room except those on duty in nursing, nor should any from the house ride in public conveyances or attend meetings. These precautions are just as necessary in slight as in severe cases, as infection from a mild case may cause a fatally severe attack in another person.

Where the rash of the fever seems reluctant to appear, the SOAPY BLANKET (*see*) will bring it out very speedily. But the above simple treatment is usually sufficient. When vomiting is almost the first symptom, six teaspoonfuls of hot water are to be taken every ten minutes for an hour; then treat as above with foot-bath, hot vinegar, and oil.

In a severe case have medical aid if at all possible. Where there is great fever spread a large dry towel or sheet on the bed. Lay one wrung out of lukewarm water on it; let the patient lie down on this. Carefully wrap him up in the damp cloth, then over that wrap the dry one, with a blanket outside over all, and the bedclothes above. This will certainly soothe for a time. It may be repeated every two hours, for twenty minutes or half-an-hour at a time, night and day, till the fever is subdued.

For nourishment in succeeding weakness, give milk and boiling water, mixed in equal parts, every two hours. If stimulants are required, give CAYENNE "TEA" (*see*), reduced in strength until it just *slightly* burns the mouth, half a teacupful every half-hour. Cool the head also if necessary, as directed for typhoid fever.

Fever, Typhoid.—Treat as under FEVER, GASTRIC, and FEVER. In addition, great care should be taken to

disinfect and destroy any stools, and especially to prevent these getting into any drinking water.

Keep the patient at rest in bed.

No solid food should be given during the *whole course* of the illness. Milk mixed with an equal quantity of boiling water is best. Give only a wineglassful at a time, as often as the patient can take it. If the patient craves solid food, it must *on no account* be given. It is almost certain to cause a relapse.

Fits.—*See* CONVULSIONS; NERVOUS ATTACK.

Flannel Bands.—*See* BAND, FLANNEL.

Flatulence.—This is the accumulation of gases in the body, usually caused by fermentation of the food at some part of the digestive process. A failure of the vital energy in the stomach and related organs is generally the cause. Over-exertion, worry, grief, any prolonged strain, will cause this failure. As first treatment, then, the *cause* should be removed, if this be at all possible. Do less work, cultivate simple faith in God instead of worry. Do not sorrow over-much. The best material remedy is to take tablespoonfuls of hot water every few minutes for several hours. If cold, the feet should be bathed (*see* BATHING FEET), or fomented, for about an hour at a time. These two simple remedies will generally prove sufficient, if persevered in.

Flushings, Hot.—These are often a really serious trouble, especially to women, at certain stages of life. Most often they come about the age of fifty, but in weakly persons may occur at any time. A disturbance in the nervous system, due to lack of energy, is the cause of such feelings. They are often accompanied by DEPRESSION (*see*). Any treatment ought to be directed to strengthening the nervous system. A good plain diet, easy to digest, is a most important matter. Soaping with soap lather over all the body (*see* LATHER) will greatly restore the tone

of the nerves of the skin. This may be done every night, and the CAYENNE LOTION (*see*) rubbed all over every morning for a week or two. This treatment will usually prove successful in curing.

Fomentation.—Some general remarks on this important treatment we give here. First, no fomenting should be done for at least an hour after a meal. And it should usually be followed by a period of complete rest. A very good way to foment any part of the back or front of the body is by an india-rubber bag of hot water of the proper size and shape, with two or three ply of moist flannel between the bag and the skin. These bags can now be had of very various sizes and shapes, and one or more should be in every house. In fomenting a knee, foot, or ankle, a good sized half or even whole blanket is necessary. Fold this one way until it is twenty inches broad. Lay it out on a clean floor or table, and sprinkle *sparingly* boiling water across one end. Roll this end over and sprinkle the roll, turn over again and sprinkle again, and so on until the whole is rolled up. Thoroughly knead and twist it, so that all is penetrated by the moist heat (*see* illustration, page 32). Or it may be prepared by soaking the blanket in boiling water, and wringing it out with a wringing machine. It may then be unrolled and unfolded so as to permit proper wrapping round the limb to be fomented. Care must be taken not to *burn* the patient, or give any shock by applying the fomentation too hot. It must be comfortable. *See* HEAT AND WEAKNESS.

Sometimes fomentation may seem to increase the pain, say in a swelled limb, and yet we should persevere in the treatment. This may seem to contradict our dictum that we should be guided by the feelings of the patient. The reason is that if some dead matter has lodged deep down in the limb, it will have to be brought up to the surface ere the diseased state can be remedied. If strong fomen-

tation is used in such a case, it is not unlikely to increase the painfulness of the limb, and a swelling may appear. It will at once be said that the disease is "getting worse." This is quite a mistake—the increased pain is arising from such stirring of life as will bring about a complete cure. If the treatment is continued, the swelling will by-and-by come to a head and burst, and can be treated as in ABCESS.

Fomentation, Armchair.—This is applied as follows. Over a large armchair spread a folded sheet. Provide a good large blanket prepared as above in FOMENTATION. Then rub the haunches, thighs, lower back and abdomen of the patient with a little olive oil. Wrap these parts in a warm dry towel. Open up the hot blanket and spread it (still some three-ply thick) on the sheet on the armchair. Let the patient sit down upon it as soon as it is cool enough not to hurt. Fold the blanket all round the patient's lower body and thighs. Draw the sheet over all, and cover up well to retain the heat. At the end of an hour, or such less time as the patient can endure, a smart washing with hot vinegar, and a gentle rub with warm olive oil, will complete the treatment. This is best done at bedtime, as the patient must go to bed immediately after it.

In cases of failure of the large hip-joints, or of the lower limbs, in sciatica and lumbago, the armchair fomentation is of great use ; also when running sores exist from one of the hips or lower back, or even in numbness or lack of vitality in the feet and toes. It is referred to under the headings of the troubles in which it is of advantage.

Suppose that we are dealing with lack of vitality in some organ in the lower part of the body. We argue that the nerves supplying this organ are needing in some way to be increased in force. This is to be done by getting them heated. There is an arrangement in nature which hinders this being quickly done. The rapid cir-

culation of the blood which is going on all round these nerves tends to keep them about the same temperature. The heat, as it is applied, passes off rapidly in the stream of the blood. But if the heating process is carried on long enough, the whole blood of the body becomes gently raised in temperature, and by-and-by the heat applied to the surface reaches the roots of the nerves, not only by means of the circulation, but by gradually passing through the skin muscles, and the bones that are near it. New life is infused, and that where it is specially required. The flagging organ soon shows that it responds to this true stimulant. After a few such fomentations it begins to act as perhaps it has ceased to act for months, and even for years. We speak of what we have seen again and again in cases where distress was caused by what is called "sluggishness" in some important organ, or when such an organ was altogether ceasing to act properly. The armchair fomentation is more successful than the hot sitz-bath, though this is by no means to be despised.

Food and Mental Power.—Unsuitable or ill-cooked food has a most serious effect on the mental powers ; and when we take the case of a mental worker, we see that, in order to carry this power right on through a long life, proper diet is of great importance. Also many good mental workers are more sensitive than ordinary men : they are more easily destroyed by strong drink or opium. The nip of brandy, the soothing draught, are terrible dangers to such. Instances of brain power continued far into old age are always lessons in plainness of diet and temperance. One such temperate man will do as much work as ten who are luxurious eaters, tipplers, and smokers. Diet for mental workers should be light and easily digested, with a preponderance of proteid food (*see* DIET). Rich, tough and fatty foods, and hot stimulating drinks should be avoided. As mental work is generally sedentary work, and consequently having a constipating tendency, some of

the vegetable foods giving a stimulus to the muscles of the intestines should form a part of the diet, such as green vegetables, fruits, and oatmeal.

Food in Health.—As will be seen from many of these articles, the question of diet is one of the greatest importance, in health as well as in disease. The onset of disease is, in fact, often due to long-continued abuse of the whole digestive system through the use of unsuitable food. By unsuitable food, we mean not so much food that is bad in itself, but rather that which is not suited to the temperament or work of the eater, or to the climate and circumstances in which he finds himself. A ploughman or fisherman, for example, may thrive on diet which will inevitably produce disease in the system of one whose work confines him to the house for the most of his time. One condition of a healthy life is, therefore, careful consideration of our work and circumstances before deciding on our diet. Also, a man of excitable and irritable temperament will need different diet from one of a slow and quiet nature. The food which will only stimulate the latter will over-excite the former, and may even make him quite ill. What is commonly called bad temper is often only the result of wrong diet, and will disappear under a milder course of food. It will, of course, be seen at once from this, that the case of every man must be considered by itself. A decision as to proper diet can therefore only be made when all the facts about a case are known, and in this matter the man himself must decide a good deal for himself; nevertheless some general directions can be given which will help our readers to a decision in their own case.

In the first place, we would guard against a very common error—viz., that a smaller quantity of food, *chemically* of a less nutritive kind, means less nourishment to the body. On this head we refer to the articles on DIGESTION and ASSIMILATION. It may only be remarked here that

what the *body actually uses*, and what is *taken into the stomach*, are two very different things. It is often the case that food containing less actual nourishment will give greater nourishment to the body than chemically richer food, because the former fits the state of the digestive system better. What each one must consider is, not what food has most of the chemical elements needed by the body, but what food will give up to his own body the most of these elements.

Another error is that the use of medicine can for long assist the body to use heavier food. In a case of disease, medicine often is of the greatest value as a temporary aid to digestion, but its continual use is the parent of great evils, and at last defeats the very end for which it was given. If a person needs continually to use medicine, there is probably either some organic disease present, *or*, *more commonly*, *great errors in the diet taken*. Avoiding medicine, then, except as a very temporary resource, and remembering that food is to be judged more by the way it agrees with us than by its chemical constitution, what rules can we give for diet in certain common cases?

First, diet should vary in summer and winter as the season varies. Foods rich in fat, such as ham and bacon, should be for winter use only, and should even then be more or less used as the weather is cold or mild. For summer diet, milk foods, such as milk puddings, etc., ripe fruits, and green vegetables should predominate, being varied also with the heat or coolness of the weather. In very hot summer weather, animal food should be very sparingly partaken of. It must also be borne in mind that warm clothing or heated rooms may convert a winter climate into a summer one.

Second, diet should vary according to the occupation of the eater. The writer and brain-worker will do best, as a rule, on little butcher meat, taking chiefly fish, eggs, and light milk foods, with vegetables and fruits. Alcohol

in any form is especially fatal to brain-workers, and must be avoided, if there is to be really good health.

Third, food must vary according to temperament, age, etc. To give rules under this head is almost impossible. The growing boy will need proportionately more food than the adult, the man more than the woman. It is indeed true here that what is one man's food is another man's poison, and that every man must find out for himself what he needs. It may be generally said that the food which digests without the eater being aware in any way of the process is the best for him.

It may safely be affirmed in relation to this question of food in health, that the middle and upper classes eat quite too much. Hence the stomach trouble and goutiness (often in a disguised form) that they suffer from. Too much carbonaceous food will produce corpulency, and too much animal food URIC ACID (*see*). On the other hand, the poor, for want of knowledge of really economical nourishing foods, suffer from want of nutrition.

An opportunity is always present, in case of sickness among the poor, by philanthropic persons to inculcate the value of good food. Instead of bringing a basket of beef tea, tea, and jelly, take oatmeal, fruit, milk, and vegetables.

What we have said should be sufficient as a hint to those who wish to regulate their diet on common-sense principles. A little careful thought should enable any one to work out a satisfactory scheme of diet for his own particular case. Regularity in meals is of great importance. There should be fixed hours for meals, with which nothing should be allowed to interfere, no matter how pressing the business may be. Do not assume, however, that it is necessary to eat at meal times, no matter whether appetite for food be present or not. To eat without appetite is an infringement of natural law, and it is far better to go without the meal if nature does not demand it than to yield to custom, or to imagine it

necessary to eat because the dinner bell has rung. If not hungry do not eat at all, wait till the next meal time; do not take a "snack" in an hour or two. Three meals are, as a rule, better than more, and many have found two suit them best. Probably one-half the human race (the inhabitants of China and Hindostan) live on two meals a day.

Food in Illness.—Light, easily digested food is of the first importance in many illnesses. To know easily procured and simple foods, which are really light, is a great matter. Saltcoats biscuits (*see* BISCUITS AND WATER) form one of the best and most nourishing foods. So does oatmeal jelly, prepared by steeping oatmeal in water for a night, or for some hours, straining out the coarse part, and boiling the liquor until it will become jelly-like when cold. Oatmeal steeped in buttermilk for a time, and then moderately boiled, makes an excellent diet. Wheaten meal or barley meal may be used for these dishes instead of oatmeal, according to taste. Many other dishes, with rice, arrowroot, sago, etc., will suggest themselves to good cooks; but for sustaining the invalid and producing healthy blood, none surpass those described.

Fright.—Some most distressing troubles come as the result of frights. In many cases much may be done to relieve such troubles, which arise from severe shock to the brain and nervous system. The results may be very various—from mere stomach troubles to paralysis—but the cure in all cases lies mainly in giving fresh energy to the nervous system.

If a blanket fomentation is placed all up and down the back, over a rubbing of warm olive oil, and the excited person is laid on that, one good step will have been taken in the way of restoration. Then this may be aided by cool cloths very cautiously laid over the stomach and bowels, so as to cool in front, while heat is given at the back. This will be specially desirable if the heat at the

back is rather high. When the blanket loses its heat it need not be taken off, but a poultice of bran, highly heated, may be placed under it, so that the heat from the bran may come gradually and comfortably through, and pass into the body in that gradual way. So soon as a sense of genial comfort spreads over the back, it will be found that a right state is stealing over the organs that were threatened by paralysis through the alarm. The defect very soon disappears.

Gangrene.—*See* CANCER IN FOOT.

Gatherings.—*See* ABSCESS; ANKLE; ARMPIT; BONE, DISEASED.

Giddiness and Trembling.—This comes very often as the result of loss of nerve power in the spinal system, due to weakness, shock, or simply old age. A great deal may be done to relieve, and in many cases to completely cure, by the following simple means. Wrap the patient round the middle in a soapy blanket, rubbing well afterwards with hot olive oil. Give an hour's fomentation at a time each night for a few nights; rest for a day or two, and repeat. The fomentation must be a blanket one, but should only extend from the armpits to the hips, not over the limbs. For treatment of giddiness arising from the stomach see INDIGESTION. Half a teacupful of hot water every ten minutes for five hours is usually an effective cure. This should be done daily for three days. Let it be kept in mind that we must not have "hard" water—that is, water impregnated with mineral substances, such as lime or iron. We must have "soft" water, that is, such as rain water nicely filtered, or "distilled" water, which can be had from any good chemist for twopence a quart.

Glands of Bowels.—*See* BOWELS.

Glands, Swollen.—This is a very common trouble, especially in the young. To restore the skin to healthy action is the first important matter. This may be done

by bathing the feet (*see* BATHING THE FEET) until free perspiration ensues, wrapping the patient meanwhile in a warm blanket. Dry well, and sponge with hot vinegar and water; dry again, rub with hot olive oil, and put to bed. As a diet, Saltcoats biscuits and water for some time have of themselves formed a complete cure (*see* BISCUITS AND WATER). The *comfort* of the patient will regulate the amount of bathing. Do this every night for a fortnight, except on the Sabbath (when rest from all treatment seems best). If the swelling be slight, two days' treatment may cure it; if the case be severe and of long standing, a longer time will be required.

For treatment of the neck, if there is no sore, put round it a cloth dipped in hot vinegar, and a good poultice of bran or moist hot bag round over this. Put this on for half-an-hour before rising in the morning. After taking them off, rub with warm olive oil, and wipe that off gently. Put a single band of fine new flannel round the neck for the day. If there be suppuration, or running sores, treat in the same way unless the vinegar prove painful, when it may be weakened with water until comfortable. This treatment will, we know, cure even a very bad case of tubercular glands. *See* WOUNDS.

There are men so skilful in medicine that they can aid wonderfully in such cases, and surgeons so apt at operating that they too, can do much good. But we should not for a moment think of leaving patients to depend on what can be swallowed, or what lancet and probe can do, when the very sources of life itself are neglected, and cures waited on for months that may be secured in a week or even less. Above all, when you know how to do it, infuse new life in the body, and promote the throwing off of that used-up matter which is showing itself in the disease. How many parents bow down before the idea that swollen glands are constitutional to their children, when the fact is that these children have very fine skins, and need to have these kept in extra good order, not

merely in the way of washing, but so that they shall perform their part of throwing off this used-up material of the body efficiently. Some of the most beautiful of our race are thus lost to the world when they might easily be saved.

In some cases swollen glands are caused by bad teeth, running from the EAR (*see*), sores or insects on the head, or inflamed tonsils. If such causes are present, they should be removed. Extract bad teeth, cure running ears, and properly cleanse the head. Gargle the throat for swollen and inflamed tonsils with warm water, in which a little salt is dissolved.

Gout.—Some have a predisposition to this most painful disease, and require to keep a strict watch on their diet. Meat, specially the internal organs, meat extracts, alcohol, tea, and coffee must be avoided, and milk, buttermilk and porridge, cheese, eggs, and vegetables, especially green vegetables, made into light and digestible dishes, should be relied on solely. Further, the diet should be a small one, most thoroughly and slowly masticated, and plenty of pure water is advisable, in order to help the elimination of the waste which causes the trouble. *See* URIC ACID.

If the feet be affected, apply gentle heat to the lower part of the spine by FOMENTATION (*see*). Sometimes a cold cloth on the lower spine will soothe, but more often heat is the true cure. Wrap the sore foot in softest cotton, and foment *very gently* through this, using only *warm* cloths, and taking care to avoid giving pain. The cloths should be just a little *below* blood heat. Cold cloths are a serious mistake, but at a temperature a little below blood heat a gentle soothing is produced. Care must in every case be taken to do only what the patient feels comforting.

Gravel.—Sometimes mere internal inflammation is mistaken for this disease. In the case of inflammation of the bladder, apply a large hot BRAN POULTICE (*see*) to the lower

back, and change cold towels over the front of the body where the pain is. Afterwards rub all parts over with hot olive oil, and wipe dry. Take only plain food, oat or wheat-meal porridge, Saltcoats biscuits, etc.

Where actual stones are formed, or a tendency to their formation exists, all water drunk should be distilled, or boiled rain water. Where stones are present the heat may be applied to the back, but *no cold in front*. The soft water tends to dissolve the stones, the heat assists in their expulsion from the body. Diet same as in GOUT (*see*).

Growth of Body.—*See* LIMB, SAVING A.

Guaiacum.—This drug is a West Indian gum, and is one of those remedies we are glad to say will do no harm, while in rheumatism and gout it is most beneficial. A teaspoonful of the tincture in a cup of hot water, or one or two of the tabloids now so easily had, may be taken three times a day.

Hæmorrhage.—*See* BLEEDING; WOUNDS.

Hair Coming off.—There are many forms of this disfiguring trouble, both in the case of young and old persons. It is chiefly due to a wrong state of the skin of the head, which is best treated with careful rubbing with vinegar or weak acetic acid, and finishing with good olive oil. The acid must not be used too strong—not stronger than ordinary vinegar. This may be done every evening, and should be rubbed on for fifteen minutes, till a comfortable feeling is aroused. Dry the head, and then rub on olive oil for five minutes. The vinegar should rather be dabbed than rubbed on. Wash all over in the morning with M'Clinton's soap. Or this treatment may be applied every other night, and on alternate nights the head may be packed up with lather (*see* HEAD, SOAPING). This treatment is quite safe, and will usually effect a cure, which is more than can be said of the expensive hair washes so much advertised. Many of these are most dangerous. As far as possible go with the head uncovered, and brush

the hair frequently. Brushing stimulates the grease glands, and causes the hair to become glossy. Probably the reason men lose their hair so much more than women is that the brushing and combing the latter must give it stimulates the hair roots. Massaging the skin of the scalp with the fingers night and morning will greatly promote growth of the hair. *See* HEAD, MASSAGING.

Hands, Clammy.—Rub the hands and arms well twice a day with CAYENNE LOTION (*see*).

Hands, Cold.—Much more than is readily believed depends on the state of the hands and feet. We are already familiar with the subject of coldness in the feet, but we meet with cases in which the coldness of the hands is as striking. It is not readily thought that cold hands have anything to do with such illness, for instance, as that of bad action in the stomach. There are cases in which a very great deal can be done to relieve a congested state of the vessels of the stomach, and even a similar state of the lungs, by only bathing the hands in hot water and then rubbing them with hot oil till they have been thoroughly heated and reddened, as they are when effectually warmed. Half-an-hour's bathing of hands in water just a little above blood heat produces a wonderful effect on an invalid when there is too great weakness to stand longer treatment. This is well known to be true of half-an-hour's good feet bathing. In some cases bathing both of hands and feet is much needed. The overburdened heart finds it a vast benefit when by such a bathing the blood is allowed to flow easily through the vessels of the feet and hands.

Hands, Dry and Hard.—Pack the hands in SOAP LATHER (*see*) mixed with a little fine olive oil. The soap must be finely lathered with a brush, not *melted*. Pure soft water, never too hot nor too cold, should be used, and the hands thoroughly dried after washing. *See* CHAPPED HANDS.

Hay Fever.—A most effective preventive and cure for this is the inhaling through the nostrils the vapour of strong acetic acid. The acid may be on a sponge enclosed in a smelling bottle, and its vapour may be freely inhaled. Sponge all over each night with hot acid and water. The head also may be wet with pretty strong acid, and tied up so as to keep in the vapour. Do not, however, use a waterproof covering.

Headache.—There is a vast variety of ailments associated with what is called headache. In itself, it is just more or less *pain* in the head. When there is such pain, it means that some of the nerves in the head are in a wrong state, probably in nearly all cases a state of more or less *pressure*. This pressure hinders the free flow of vital action along the nerve, and this hindrance we feel as pain. To remove the pressure is, then, to relieve the pain. Pressure from overwork often causes headache on week-days, which goes off on Sabbath. The *rest* here removes the pressure, and so the pain. The pressure results from a failure of energy in some part of the head, slight swelling then taking place. To increase the energy is to effect a cure. This may be done by first, at bedtime, soaping the back with warm water and SOAP (*see*). Then dry, and rub firmly yet gently with hot olive oil, until the whole back glows with warmth. This may take perhaps fifteen minutes. Then give three minutes of warm water pouring over the back. Dry again, and oil with hot oil, and put the patient to bed. Avoid much tea. Avoid altogether tobacco and alcoholic liquors, which of themselves will often cause the trouble. This treatment applies to all that numerous class of headaches which arise from overwork and fag. A cure may often be had by its means, without taking a holiday. But where this can be done, it is well to take it.

The headache, however, may be caused indirectly by the failure of some of the organs to do their duty, when

other methods must be adopted. The use of tobacco so injuriously affects the whole system that headache often results, and refuses to be cured unless the tobacco be given up. It is hard to do this, but the difficulty must be faced. Cold, damp feet are a common cause of headaches. Let these be well bathed (*see* BATHING FEET) for some days, even twice or three times a day, and many kinds of headaches will be cured. Constipation, or sluggish action of the bowels, frequently causes headache. The cure is obvious (*see* CONSTIPATION). Imperfect action of the kidneys also causes it. In such a case apply a large, warm bran poultice (*see*) across the back behind the kidneys. Oil the skin before and after poulticing. Do this once a day at bedtime for a week, if necessary, but not longer than a week at a time. Take half a teacupful of water before each meal. Use freely the lemon drink described in DRINKS, REFRESHING.

Headache, Sick.—The stomach and head affect each other powerfully, and a disordered stomach causes severe headache, known as *sick headache*. In many cases a few tablespoonfuls of hot water, taken at intervals of five minutes, will effect a cure. He is himself "simple" who laughs at this as "simple." If a dose of hot water *cures*, and removes any need for expensive drugs, that is a matter for thankfulness and not for laughter. When some substance not easily dissolved has lodged in the stomach, hot water is often all that is needed to remove the trouble. But it must be remembered that over-eating, or the eating of indigestible food, must be given up, and the food must be masticated till it is reduced to a liquid condition.

Many will say they have not time for this, but time must be taken, and half the quantity of food well masticated will nourish better than the whole imperfectly masticated.

Headache on waking in the morning is a frequent result of stomach disorder. In such a case take two teacupfuls

of hot water, with an interval of ten minutes between. In many cases a slice of lemon in the hot water powerfully aids to cure. Especially is this the case where pains in the bowels are felt along with the headache. If lemons cannot be had, a few drops of vinegar will form a good substitute. Continue to take half a teacupful at intervals all day.

Sick headache may, however, arise from the head causing disorder in the stomach. The head may then be fomented gently, and if necessary soaped (*see* HEAD, SKIN OF) or massaged (*see* HEAD, RUBBING, MASSAGE), which should in most cases remove the trouble if carefully and well done.

Headaches are frequently caused by anxiety and worry, which have all the marks of sick headache. Dull pain and heat, more or less persistent, also arise from this cause. The treatment for such cases is given in the preceding article for pressure from overwork. It is well to see, in such cases, that the mental and spiritual cures be applied, as well as the material. Let there be resolute putting away of all worrying ideas at night, and during every leisure time. Let perfect trust in a loving Heavenly Father relieve us of all burdens. Much may thus be done to cure even a sore head and weary brain. We are of "more value than many sparrows" to One whose power and wisdom are really infinite. Take both sides of this great truth, the spiritual and the material, and you will find it a glorious help in worry and disappointing failure. What a remedy it is when good medical treatment and true faith in God come together to give peace to the weary one! *See* WORRY.

Head Baths.—*See* BATHS FOR HEAD.

Head, Massaging the.—This is so important in many cases of neuralgia, headache, and eye troubles, that we here describe it. The brow is first gently stroked *upward* from behind, with the palm of the hand, while

the back of the patient's head rests against the chair or other support. The sides of the head are then similarly treated, using a hand for each side simultaneously. Then the back of the head is stroked upward also. After this is well done, the top of the head is stroked similarly from front to back. Then the whole head, except the forehead, is rubbed briskly but lightly with the tips of the fingers with a scratching motion, but *not* using the nails.

This is best done piece by piece, taking care to do every part in turn. This treatment may be often alternated with the cooling of the head with cold towels, with the best results. In all cases of head uneasiness and neuralgia it is *invaluable* (*see* EYES, PARALYSIS OF; EYES, SQUINTING; MASSAGE). Frequently a small part of the head will be found where the rubbing with the finger tips is particularly soothing. Special attention, of course, should be given to this, as it is nature's guide to relief. But if pain and uneasiness result from the rubbing, it should be stopped, and some other cure substituted. Understand that

what you have to do is to gently press the returning stream of venous blood on in its course from the weighted brow back over the top of the head. Rub very slowly and deliberately, as the stream you are affecting flows slowly. The frequency with which you change from the rubbing to the cold cloth, and from that again to the rubbing, will depend a good deal on the heat that you find persistent in the head, but usually you may rub two minutes and cool during one minute. More or less relief will come in a very short time, and in ten minutes or a quarter of an hour there will be a very great change for the better.

We had a very curious case lately. A little girl was brought to us one morning who had been quite blind of one eye for a fortnight. We tried the eye with a rather powerful lens, but she could see nothing. That eye had a squint, which was also of a fortnight's standing. The pupil of the eye was dilated, but nothing else seemed wrong. The girl was affected with worms in some degree, but otherwise healthy. We gave her head a massaging, such as we have been describing, for some ten minutes or so. She was given the first of four or five doses of santolina next morning, which her mother said she threw up and some bilious matter besides. She was brought to us an hour or so after, and we found that she had forgotten which had been the blind eye. She now saw perfectly with both, and the squint was gone. We had not tried whether the rubbing had had the curative effect before the santolina was given, or whether it was after the latter that the sight was restored, but we are disposed to think that the squinting and blindness both had given way to the head's improvement by the massaging.

Head, Skin of the.—The nerves of sensibility are very largely supplied to the skin of the head, and many large nerves pass under it. It is therefore an important matter that it be kept in a right condition. In various troubles

it becomes hard and dry, and even contracts and presses very painfully upon the head, feeling as if it were dried parchment. The pain thus caused is different from neuralgia, and cannot be relieved by cooling, but is easily cured by soaping the head (*see* HEAD, SOAPING). This may be done every night, and the head tied up with the soap lather until morning. It may then be sponged, dried, and a little hot olive oil rubbed into the skin. In a serious case, where the patient is in bed, this treatment may be given night and morning. Always, in treating such a head, be very gentle, for the least touch is often painful to the irritated skin. The use of a pure and proper pomade, such as some preparation of vaseline, is of importance where the skin is dry, and tends powerfully to preserve the skin and hair in healthy condition.

Careful brushing of the hair, and rubbing of the skin of the scalp will, too, be of use. *See* HAIR.

Head, Soaping.—Have a piece of M'Clinton's soap, a good shaving brush, and a bowl of warm water. Rub the wet brush on the soap, and work the lather up in the hollow of the left hand, taking more soap and water in the brush as necessary, until the left hand is full of creamy, thick lather. Lay this on all over the patient's head. Make another handful, and lay that on also. The lather may be wrought into the mass of hair until it reaches the skin, the brush being dipped in the warm water, and used to work the lather well into the skin of the head. This must be continued until the whole head is thickly covered with fine white lather, like a wig in appearance. You need have no difficulty with ever so much hair. You only comb that nicely back at first, and place the soap lather on the fore part of the head. Then you bring the hair forward, and soap the back part. You may work on at this process for half-an-hour. You will by that time have produced a most delightful feeling in both body and mind of your patient. Tie a soft handkerchief over all, and leave for as long as needed—even all night if required.

When removing the lather, use a sponge and warm vinegar or weak acid (*see* ACETIC ACID), and dry gently with a soft towel. This application can be used with good effect in all cases of hard, dry skin on the head, and formation of white scurf. It preserves the hair, and stimulates its growth. It also removes the painful sensitiveness to touch so often felt in the hair and head skin. Care must ever be taken to do it all with a gentle hand. So done it is priceless in its soothing and healing effects on irritable nerves.

Head, Sounds in.—As the result and accompaniment of deafness these are sometimes most distressing, even preventing the patient from sleeping. They are often caused by chill producing some inflammation of the ear, and stoppage of the internal or external air passages. Have a large FOMENTATION (*see*) carefully packed round the whole head. If properly done, the patient will be comfortable in it for an hour. The fomentation must then be taken off, the head rubbed quite dry, and a warm covering put on. Do this before bedtime for three or four nights. Then desist for three nights. After this place a hot BRAN POULTICE (*see*) on the back of the head, neck, and spine, so that the patient can lie comfortably upon it for an hour. Oil before and after with olive oil. Give this at bedtime for three or four nights, and rest again for three or four days more. Avoid exposure during this treatment. It is suitable for all cases of ear trouble through chill.

It will be specially important to see that the feet are comfortable, and that health generally is looked to. *See* EARS ; HEARING.

Health and Money.—It will be noticed that the remedies we recommend are in almost every case very cheap—even, like hot water, costing nothing, as they are in every house. This very simplicity and commonness has turned many against our treatment. We know, indeed,

of one curious case where olive oil was derided and despised by a rheumatic patient, until his friends got it labelled "Poison, for external use only." It was then eagerly applied, and effected a cure. We warn our readers very seriously against this folly. It is traded in by some who sell the simplest things as secret cures at exorbitant prices, and impoverish still further those who are poor enough already. The *price* of a drug or appliance is no indication of its value as a cure. Neither is its lack of price. Nor is the price of any particular food or drink an indication of its value. Good and nutritious foods are generally cheap and easily procured. *See* DIET, ECONOMY IN. Our effort has been to find out cures within the reach of every household; and we have found that, as God has put water and air freely within man's reach, so has He put those things which best cure disease within the reach of the poorest. Let us not then despise such things because they are common.

Hearing.—We have had so much success in helping the deaf that we feel warranted in seeking to spread the knowledge of our methods as widely as possible.

Deafness is caused in many ways—very often by exposure of the head to a chill, especially in infancy. We have seen it even arise from enclosing the head in a bag of ice with a view to extreme cooling. What is called "throat deafness" is a different matter, but yields to the same treatment as the cases of chill. The process of cure is very similar to that used in cases of failing sight (*see* under EYES), for the aural nerve has to be stimulated as the optic nerve in these cases. Rub the back of the head and neck, using hot olive oil, and continuing gently, yet firmly, until all the parts are in a glow of heat. Do this some time during the day. At night apply the BRAN POULTICE (*see*), oiling before and after, to the back of head and neck, the patient lying down on it for an hour at bedtime. *Gently* syringe the ears with tepid water, but only so far

as to cleanse them. Rub with ACETIC ACID (*see*) behind the ears, but *not so as to cause soreness*. In an obstinate case continue treatment for a month, then rest for a fortnight, and continue for another month.

Cases of deafness arising from dryness and hardness in the ears are to be treated differently. The ear is brushed internally with soap lather (*see* LATHER and SOAP). Dip a brush, such as is used for water-colour drawing, into hot water, rub it on the soap, and gently brush the inside of the ear. Renew the lather frequently, keeping up the heat. With another brush moisten the same parts with fine almond oil. Gently, but thoroughly, dry out the ear with a fine roll of lint or *soft* cotton. In a fortnight we have seen great benefit from this done daily or twice a day. Be careful not to use pressure on the inside of the ear when washing or drying, as this may cause the wax to harden into balls, pressing on the drum. The whole head may also be rubbed with acetic acid, not so as to cause pain, but simply a strong heat in the skin. In all treatment of so delicate an organ as the ear, avoid giving *pain*.

If the deafness proceed simply from a relaxed state of the tissues in the tubes of the ear, the cold douche applied to the head, with careful drying and rubbing afterwards, will often effect a cure. But it is only a *sudden*, *brief*, cold splash which is wanted, not a stream directed for any time on the head, which might do serious injury. In this connection it may be noticed that a child should never be punished by "boxing its *ears*." Children have had their hearing permanently injured by this thoughtless practice.

Heartburn.—*See* ACIDITY IN STOMACH.

Heat and Weakness.—We have over and over again shown in these papers how heat passes into vital action, and gives strength to failing organs and nerves. But the heat supplied to these organs must be at a certain temperature. All experience goes to show that *gentle* heating

will do all that is required. Moreover, too hot a fomentation, especially if a large one, will weaken the patient, and defeat its own ends. In such a case it is folly to throw up the treatment, and say that heat weakens, when all that is needed is to apply heat at a lower temperature. The right degree of warmth is indicated by the comfort of the patient. It will vary in almost every individual case, and must be found by careful trial. Also it may vary from hour to hour. The heat comfortable during the day may be found insufficient or too great by night, and so on. We must in these matters apply our common sense, and make a real effort of thought, if we wish to be successful.

Heat, Internal.—There is a usual (normal) temperature in all the blood and tissues of the body. If the body be either warmer or colder than this point (98·4 deg. Fahr.), its health is interfered with. A "clinical thermometer" is used to ascertain whether the bodily temperature is normal or not. It is to be had at every druggist's, and is of great importance in a household. By its means the rise of temperature can be detected often before any serious symptoms set in, and due means taken to check trouble in its early stages. The instrument is used by putting it under the armpit, or, with children, between the legs, so that the the mercury bulb is entirely enfolded and hidden between the arm, or leg, and the body. Left in this position for five minutes, it is taken out and read. It may also be held in the mouth, under the tongue, with lips close on it.

Where a good deal of fever is shown, as by a rising of the mercury to 101 deg., measures to reduce it should at once be taken, as shown in the articles on various kinds of FEVER. By watching the temperature, and taking it from time to time, we can see when cooling is sufficient. Where the temperature is too low—that is, below 98$\frac{2}{5}$ deg.—rub all over with warm olive oil, and clothe in good soft flannel. Other methods for increasing vital action may also be tried, as given in many of our articles.

Heel, Sprained.—Often in sprains all attention is given to the bruised and torn *muscles*, while similarly bruised and torn *nerves* are overlooked ; yet upon the nerves the perfect healing of the muscles depends. Hence, in a sprain of the heel we must be careful not to direct attention to the heel exclusively. That may be bathed (*see* BATHING FEET) and duly rubbed with oil. A good plan is to apply cloths dipped in cold water and vinegar. Keep the limb perfectly still, and do not attempt to use it for at least a fortnight. After this it may be cured to all appearance, yet a weakness may be left which prevents anything like the full and free use of the limb. It may be all right when resting, but suffers when used for any length of time : this indicates pretty plainly that *rest* is needed, and is an essential thing for cure. But besides this rest, the foot should be packed during the night in soap lather (*see* LATHER and SOAP). Wash the foot in vinegar or weak acetic acid, rub the whole limb from the ankle *upwards* in such a way as to draw the blood up from the foot, avoiding all down-strokes. Use a little olive oil in this rubbing. Note that the whole limb needs treatment. The juice of *Lady Wrack*, such as is to be found on the west coast of Scotland, is an excellent remedy for sprained joints ; but we only mention it, as it must be inaccessible to many of our readers.

Hiccup.—Though often but slight, disappearing in a few minutes by some simple device, such as holding the breath, when long continued this becomes most serious. Very often it is an added distress in trouble which is itself incurable ; but while the patient's life cannot be saved, the hiccup may be relieved. In the common case of infant hiccup, a lessening of the over-supply of food may be all that is required. One or two teaspoonfuls of hot water given to the infant will usually give immediate relief. For a grown-up person with a slight attack, one or two teacupfuls of the same will also usually prove a remedy.

For serious cases the treatment is a large BRAN POULTICE (*see*) placed on the back, opposite the stomach. Well oil the back before and after the poultice, and leave it on for an hour. If this fails, after a little, prepare a blanket as directed under FOMENTATION. Roll it up until it is the size of the patient's back, and let him lie down on it. (Read here article on HEAT AND WEAKNESS.) Then a small cold towel may be passed gently over the stomach. This will generally relieve. It may be repeated if necessary.

Hip-Joint Disease.—Thorough heating, with moist heat is the best treatment for this trouble. This implies time, work, and patience; but all these are well spent. Let a strong fomentation be given twice a day to the hip joint, with oiling before and after, each application lasting at least an hour (*see* COOLING IN HEATING; FOMENTATION; HEAT AND WEAKNESS). In all probability a gathering of matter will come to the surface and discharge itself. Treat this as recommended in article on ABSCESS, and persevere until the joint is thoroughly renovated. It may take a time, and the treatment should always be intermitted on Sabbath, and sometimes a few days' rest be given. The patient's *comfort* is the safe guide in this.

Hives.—*See* RASH.

Hoarseness.—This trouble we may consider in *three* ways:—First, as the effect of overstrain in using the voice; in this case rest must be taken from speaking or other such work. Remedies which restore the voice without rest are very likely to do permanent injury. For application to the throat, use vinegar or weak ACETIC ACID (*see*) of such strength as to cause just slight smarting of the throat when applied as a gargle, or with a proper brush, such as any chemist will supply. This may be done frequently, and, together with rest, will rarely fail to cure. Rubbing the throat externally with acetic acid of full strength until a rash appears is often very helpful. Those

engaged in public speaking would do well, especially in youth, to cultivate the habit of correct breathing (*see* BREATHING, CORRECT METHOD OF). Articulation should be clear, and the words formed sonorously, and from the stomach, as it were. This, indeed, will apply to everyone. Such a method of producing the voice will not only be harmonious, but will exercise insensibly a beneficial influence on the nervous system and mental tone of the individual.

It is a fact that actors who study the method of voice production do not suffer from that form of sore throat known as clergymen's sore throat, simply because they have learned to produce their voice in this way.

Secondly, hoarseness may arise from exposure to cold, damp air. In this case it is best to apply mild heat to the *roots* of the nerves which supply the voice organs. This is best done by applying a bran poultice to the back of the neck, oiling before and after with olive oil. Carefully dry the skin, and wear a piece of new flannel, for a time, over the part poulticed. This may be supplemented by brushing as above with the vinegar.

Thirdly, failure of skin action, or of the proper action of other waste-removing organs, may be the cause of hoarseness. In addition to the treatment recommended above, we must in this case stimulate the skin: this is best done by rubbing with CAYENNE "TEA" (*see*) all over the body at bedtime. Let this be done for four or five nights, and the throat treatment be given in the morning, when a cure may be looked for. *See* UNDERWEAR.

Hooping Cough.—*See* WHOOPING COUGH.

Hope and Healing.—The mind has always an influence on the body. Life rises and falls under the influences of ideas, so as to prove that these are a matter of life and death to man. To give an invalid *hope* is, then, to help mightily in healing the disease, whereas to tell patients that they are incurable is the sure way to make

them so. But there is, on the other hand, little good in falsehood and false hope: this has often been found to fail and leave the patient in complete despair. No one can tell the immense power for healing which is exerted when one who truly hopes for the patient looks brightly into his eyes, and speaks with a genuine ring of hope of the possibility of cure. So many cases found incurable by the usual treatment have yielded to that recommended in these papers, that in almost all cases we may see some ground for hope, if not of cure, at least of great alleviation. To give this impression to a patient is to half win the battle.

There are many who speak most carelessly, even wickedly, to those in trouble. They think it a duty to dash their hopes and predict gloomy things. Such should never enter a sick-room, and should, indeed, change entirely their manner of speech. To go about the world sowing doubt and gloom in men's hearts is a sorry occupation, and one that will have to be accounted for to Him who is emphatically the "God of hope."

Look, then, in treatment for every least sign of improvement. Discourage all doubts and encourage all hopes, and you will make what would be a really hopeless case, if the patient were left to despair, one that can be comparatively easily cured. "A word to the wise is enough."

Hot Flushings.—*See* FLUSHINGS.

Hot-water Bags.—The flat rubber bags of various shapes, to be had from all rubber shops, make excellent substitutes for poultice or fomentation; but care must be taken to have two or more ply of *moist* flannel between the bag and the skin of the patient. This ensures a supply of moist heat, which is in almost every case the best.

Housemaid's Knee.—To cure a swelling on the knee-joint is, as a rule, easy. *Rest* is a first and paramount necessity. Bathing with hot water, not too hot for comfort, for at least an hour each day is usually sufficient. If

the knee has been blistered, or leeched, it is more difficult to cure; but a cure may be expected if the bathing be continued for a long enough time. It is best done by wrapping a cloth dipped in vinegar round the knee, and placing the foot in a bath, then pouring hot water on the bandaged knee, lifting it from the bath in a jug.

When pain in bending is felt in the very centre of the knee-joint, this hot pouring may be needed for a month, or even longer. During the intervals of pouring a large cold compress should be worn, first well oiling the knee. Cover the compress with oiled silk. This will soften even a very stiff knee, so as at least to bring about ability to bend without pain. Of course, if there is any disjointing, good surgical aid must be had, if possible, to replace the bones in their natural position.

Hydrocele.—*See* DROPSY.

Hysteria.—This is usually brought on by some excessive strain upon the brain nerves, and may show itself either in the violent or in the fainting form; it may even pass from the one to the other, fainting alternating with violent movements and cries. It may often be checked by plunging the patient's hands into *cold* water.

In the silent stage, where sometimes unconsciousness continues for hours, a dry blanket should be laid on a bed, and another blanket must be rolled up and prepared with hot water as directed in FOMENTATION. Fold this until it is the size and shape of the patient's back, and lay her down on it, so that the whole back is well fomented. Take care not to burn the patient: soothing heat, not irritation, is required. Consciousness will usually return almost immediately. All except attendants should be excluded from the room. Allow the patient to rest in this comfortable warmth until signs of discomfort appear, then gently rub the back with hot olive oil, dry, and leave to rest or sleep if possible. Do all with great *steadiness of temper and kindness*; such a condition in the nurse is

especially essential in these cases. Where the fit is violent, apply every mental soothing influence available, and remove from the room all excited persons. Then apply cold cloths to the spine to soothe the irritated nerves and brain. Two may gently and kindly hold the patient, while a third presses on the cooling cloths. In about half-an-hour the fit should be overcome. A difficulty in treating such cases is the terrifying effect of the violent movements, or unconsciousness; but these should not create fear. As a rule, a little patience and treatment as above remove all distress. Where there is a hysterical tendency, give abundance of good food, and let the patient live as much in the open-air as possible.

The patient should be kept employed. God made us all to be workers, and this sad affliction is frequently the punishment of idleness. No one has any excuse for this, for the world is full of those who are over-worked and whose burden could be lightened. The girl whose only task is to exchange her armful of novels at the library will never know what true happiness is, nor deserve to. *See* IMAGINARY TROUBLES.

Illness, The Root of.—In treating any trouble it is well to get to the root of it. On one occasion a patient complained that the doctor never struck at the *root* of his illness. The doctor lifted his walking-stick and smashed the brandy bottle which stood on the table, remarking that his patient would not have to say that again. This will illustrate what we mean. Liquor drinking must be given up: it is the root of multitudinous ills; so must excessive tea drinking. Tobacco is one of the most insidious of poisons in its effects on the nerves, and is to be absolutely given up if a cure is expected in nervous cases. Chloral, laudanum, and opium in other forms, may give temporary relief; but they are deadly poisons, paralysing the nerves and ultimately completely wrecking the system. The continued use of digitalis for heart

disease is a dreadful danger. We mention these by name as most common, to illustrate the truth that it is vain to treat a patient while the *cause* of his illness is allowed to act. If any evil habit of indulgence has given rise to trouble, that habit must be given up; a hard fight may have to be fought, but the victory is sure to those who persevere. Often dangerous symptoms appear, but these must be faced: to relieve them by a return to drugs is to fasten the chains more surely on the patient. It is better to suffer a little than to be all one's life a slave.

Imaginary Troubles.—These are of two kinds, the one purely imaginary, the other where bodily trouble is mixed with the imagined. In the first case the patient is in agony with a pain, when nothing wrong can be discovered in the part, or even elsewhere, to account for it. In such a case, proper treatment of the BRAIN or SPINE (*see*) will often relieve. Again, a patient has set up such a standard of health that what would not trouble any ordinary person at all, gives him much distress. An intermitting pulse often is a source of great anxiety; but we have known people with intermitting pulses continuing in good health for forty years, and living to old age. So with many other heart symptoms that need give no concern at all. Sprains to some muscles are often taken for serious internal inflammation, and a slight cough and spit are taken for consumption. Care must be taken to resist all such fancies, and if not otherwise removable, *thoroughly competent* medical advice will often put the patient right. In such a case a medical man of undoubted high standing is best consulted, for an inferior practitioner may nearly kill the patient by arousing needless fears, which are afterwards difficult to remove. *See* HYSTERIA.

It must be remembered that diseases of the imagination are as actually painful to the patient as if they really were organic troubles. It is, therefore, useless to laugh at or

pooh pooh the trouble, or suggest that the sufferer is only humbugging. Attention must be paid to diet, exercise, and to material, mental, and moral surroundings, so as in every way to relieve the patient from those apparent troubles that so annoy him. Great gentleness, firmness, hopefulness, and sympathy will often bring about an almost unconscious cure. If the trouble has been brought about by over-work and worry, complete rest will often be needed. If there is something in the surroundings that jars, a change may be advisable.

Indigestion.—(*See also* DIGESTION; ASSIMILATION.) This subject leads naturally to a consideration of *food* in relation to it. The trouble usually is that food easily enough digested by others causes distress to the patient. Here we at once see that *cooking* plays a most important part. Potatoes, for example, when steeped for half-an-hour in hot water, which is changed before they are boiled, are much more easy of digestion. The water in which they have been steeped is found *green* with unripe sap, which is all removed. Where *unripe* juice is present in any root, this method of cookery is a good one. Eggs placed in boiling water, and allowed to remain so till the water is getting cool—say *half-an-hour*—are often found to be much more easily digested than as usually prepared. What we aim at in these illustrations is to show that digestion depends on the *relation of the food taken to the juices of the stomach which are to dissolve it.* It must be brought into a digestible state if weak stomachs are to deal with it.

Greasy, heavy dishes must always be avoided. Also unripe fruit. The diet should be spare, as very often indigestion proceeds simply from the stomach having had too much to do.

A very easily digested food is fine jelly of oatmeal made in the following way :—Take a good handful of the meal and put it in a basin with hot water, sufficient to make the mixture rather thin. Let it steep for half-an-hour. Strain

out all the rough particles, and boil the milky substance till it is a jelly, with a very little salt. To an exceedingly weak patient you give only a dessertsponful, and no more for half-an-hour. If the patient is not so weak you may give a tablespoonful, but nothing more for half-an-hour. In that time the very small amount of gastric juice which the stomach provides has done its work with the very small amount of food given. Really good blood, though only very little, has been formed. The step you have taken is a small one, but it is real. You proceed in this way throughout the whole day. The patient should not swallow it at once, but retain it in the mouth for a considerable time, so that it may mix with the saliva.

By this, or by porridge made from wheaten meal, you may secure good digestion when the gastric juice is scanty and poor; but we should not like to be restricted to that. We want a stomach that will not fight shy of any wholesome thing. We must treat it so that when suitable food is offered it may be comfortably digested.

Now, there is an exceedingly simple means for putting the glands in order when they are not so. About half-an-hour before taking any food, take half a teacupful of water as hot as you can sip it comfortably. This has a truly wonderful effect. Before food is taken, the mucous membrane is pale and nearly dry, on account of the contracted state of the arteries. In many cases the glands that secrete the gastric juice are feeble; in others they seem cramped, and far from ready to act when food is presented. The hot water has the same effect on them as it has everywhere else on the body—that of stimulating the circulation and bringing about natural action. It looks a very frail remedy; but when we can, as it were, see these glands opening and filling with arterial blood the instant they are bathed in this same water, and see how ready they become to supply gastric juice for digestion, the remedy does not look so insignificant.

We have, in scores of cases, seen its effects in the most delightful way. Persons who have to our knowledge been ill and miserable with their stomachs for years have become perfectly well from doing nothing but taking half a teacupful of hot water regularly before taking any food. It is true that great good is effected in cases of this kind by giving the weakened organ light work to do for a time. Wonders are done by feeding with wheaten-meal biscuits and water for some time, beginning with a very small allowance, and seeing that every mouthful is thoroughly chewed. Great things, too, are accomplished with such wheaten-meal porridge as we have already mentioned. But we feel disposed to regard the half-teacupful of hot water regularly before eating as the chief means of cure. It is wonderfully cheap: it goes hard with the druggist if his customers need nothing but a little hot water. Still, from what we have seen, and from what some of the very highest authorities have told us, we come more and more to look to this simple remedy as about all that is required inwardly to cure the worst cases of indigestion.

A little pepsin added to the hot water may be of use; also in cases of acidity a few drops of white vinegar mixed with the water will be found beneficial.

Soda, iron, lime, charcoal, even tar pills are used as remedies for indigestion; but none of them do much good, and some are highly injurious. If used at all, their use should be temporary, and under good medical advice.

If pain is felt, the stomach may be greatly soothed by soft fine lather (*see* LATHER and SOAP). It acts in such cases like a charm. Spread it gently over the stomach, and wipe it off with a soft cloth. Cover again with fresh lather. Do this five or six times, and cover up the last coat with a soft cloth.

All indulgences which tend to weaken the stomach are to be avoided. Alcohol and tobacco must be given up.

Over-excitement must be avoided, and abundance of fresh air breathed, if a cure is to be expected.

Where sudden and violent pain comes on after meals, a poultice or hot fomentation applied directly over the stomach is the best remedy at the time. *See* FLATULENCE.

Infant Nursing.—A mother who has had strength to bear a child is, as a rule, quite strong enough to nurse it. Suckling is natural, and usually most beneficial to health. Many women have better health and appetite at such a time than at any other. Every mother ought, therefore, unless her health forbids it, to nurse her own child; no other food is so good for it as that which nature provides. We cannot too strongly condemn the mother who from indolence or love of pleasure shirks this sacred duty. By so doing she violates the laws of nature, which can never be done with impunity. Many troubles follow, and her constitution is seriously injured. Alas that we should ever have to say, with Jeremiah: "Even the sea monsters draw out the breast, they give suck to their young ones; the daughter of my people is become cruel, like the ostriches in the wilderness."

If a wet-nurse must be employed, great care should be exercised in choosing a healthy person with a child as near as possible to the age of the infant.

Let mothers remember that there is great *variety* in milk. Not only does one mother's milk differ from another, but the same mother's milk varies from time to time. Variation in health and diet affects the milk very much. Many cases of infant trouble are traceable to the mother's milk, which should not be overlooked as a possible cause.

Again, an *abundance* of milk is not always good. An infant may thrive better on a scanty supply of good milk than on an abundance of bad milk. Milk derived from drinking ale, porter, or alcoholic drinks of any kind, though abundant, is very far indeed from good, that produced by plain and simple diet is always best.

Again, the *state of the mother's mind* has a great deal to do with the quality of her milk. A fright, or continued worry, may transform good milk into most injurious food for the child.

There need be no fear caused by these ideas: it is only in exceptional cases that nursing need be given up; the natural way is always the best. But where necessary there need be no hesitation in putting an infant on the bottle. The milk of a healthy cow, or condensed milk of first-rate brand, is much to be preferred to that of a wearied, worn-out, and worried mother.

Infants' Food.—For infants who cannot be nursed at the breast, cows' milk in the "bottle" is the best substitute. But all milk used from the cow should be sterilised and cooled before use. That is unless it is found on trial that the child thrives better on unsterilised milk. It is not necessary to have "one cow's milk;" but it is important to have the milk adapted in strength to the infant's need. If the milk be too rich, the infant will often break out into spots, or will vomit. A little more boiling water in the bottle mixture will remedy this, and often prevent serious trouble. The same proportion of water and milk will not always do. One dairy's milk, and even one cow's milk, differs from another; and so does the digestive power of infants. We have to find out that strength of milk to suit our own baby, and not be led astray by the advice of other mothers. In health the young infant does not require food oftener than every two hours, sometimes even every three. It may cry because of cold, wet, or discomfort, not from want of food. To overload the stomach with food is harmful and leads to serious disorders. Its food requires a certain time for digestion, even in an infant, and as the child grows, the intervals between meals ought to be increased.

A good mixture is two parts of cow's milk to one of water. To every pint of this add four teaspoonfuls of

sugar, and a tablespoonful of cream. Barley water may be used instead of common water. The water should be boiling, and should be poured into the milk. The bottle should be thoroughly cleansed, and boiled in boiling water before re-filling. It must be remembered that the saliva does not possess the property of turning starch into sugar till the child is six months old; therefore starchy food, such as bread, arrowroot, etc., should on no account be given before that age. Preparations for weaning may then begin, by giving the child *small* quantities of oatmeal jelly and milk, or even of porridge and milk, so that the weaning comes on gradually. The time of nursing should not exceed nine months. If, however, a child afterwards be ill, there is no harm in going back for a time to the bottle, even at two years old. Common sense must guide, and not hard-and-fast rule. Easily assimilated food must ever be chosen; and as a food for children, oatmeal porridge, well boiled, holds the first place—far before bread sops. If porridge be not easily digested, try oatmeal jelly. Most of the infant foods so largely advertised cannot be recommended.

It is now suspected that tuberculosis is transmitted to children mainly from the milk of cows affected with this disease. Cows are exceedingly liable to tuberculous disease of the udder. It is therefore very difficult to get milk guaranteed free from the tubercle bacillus, and recent examinations of that coming into Manchester and Liverpool showed that from 18 to 29 per cent. contained this deadly germ. (Strange to say, tubercular disease of the mother's breast is practically unknown, and children never derive the disease from their mother's milk.) It is therefore of the greatest importance that only the milk of cows proved free from this disease should be used. The disease is easily detected, and if a demand were created for milk guaranteed free from the germs, dairymen would soon supply it.

Unless it is *absolutely certain* the cows supplying the milk are free from disease, the milk should be sterilised by heating to near boiling point, and then cooling *rapidly*. If kept twelve hours, the boiled taste goes off it, and children soon get to like it. Though sterilised milk will keep for some time without getting sour, it should be sterilised each day, specially if for infant use.

This treatment makes the milk keep without the use of preservatives, such as boric acid. We regret to say the use of these is not illegal, and they are largely used in preserving milk, butter, hams, etc. We have seen very serious illnesses produced in children (and adults too) by the heavy doses they have got when both the farmer and milk vendor have added these preservatives. This they often do at the season when the milk easily turns sour. Every care should therefore be taken to get milk guaranteed free from these noxious drugs; and if this is impossible, condensed milk should be used instead. As there is a great variety of brands of condensed milk in the market, always choose one which guarantees that the milk taken has been whole milk, and also unsweetened.

Infants' Sleep.—*See* CHILDREN'S SLEEP.

Infection.—Few things have so great and distressing effect as the fear of infection in disease. As a rule this fear is not justified by the facts, where ordinary precautions are taken. These precautions, too, need not be costly, and involve in many cases little more than some careful work. Where scarlet fever has shown itself in any household, the very first thing is to see to the continuous freshening of the air in the sick-room and in all the house. Ventilation is, indeed, the first and most important method of disinfection. Chloride of lime and other disinfecting fluids will decompose the offensive and noxious odours, but pure air will sweep the organisms of disease themselves away. Fresh air kills the microbes of certain diseases, *e.g.*, consumption, and is hostile to all disease. The

stools of typhoid patients should be disinfected, and great care taken that no water or other fluid is contaminated by them through imperfect sanitation, etc. (*see* FEVER, TYPHOID). Seeing that the seeds of disease are all around us, the best method of warding off their attacks is to keep the body in a state to resist their inroads by strict attention to diet, exercise and ventilation. Let all be done also, by fires if necessary, to thoroughly *dry* the room and house. See that all the family breathe fresh air by night as well as by day ; have open windows where and when possible.

Acetic acid is as powerful a disinfectant as carbolic acid, in proportion to its strength, and has the advantage of being harmless, unless in the glacial form.

In all cases of infectious disease these precautions are almost certain to prevent its spread, with, in addition, the special ones given under the head of the disease.

Inflammation, Deep-seated.—Often inflammation occurs in the centre of, or beneath, a mass of muscle, as the hip or thigh. We refer not to the formation of an ABSCESS (*see*) , but to the violent, hot inflammatory action that often *issues* in an abscess. For this the treatment should be strong moist heat applied to the back, where the *nerve roots* of the inflamed part lie, and *persistent* cooling of the part which is painful. The heat may be by bran poultice, fomentation, or hot-water bag and moist flannel. The cold must not be ice, but only cold water cloths frequently renewed.

It is curious to see how people are frightened at the only thing that gives relief, and not at all at that which does the most damage. A gentleman wrote us once that he had had eighteen blisters on, but was afraid to apply a cold cloth. We wrote him that if he still lived after eighteen fly blisters, he would surely not die under a cold cloth. They will say they have tried so many things. We reply, that if they had tried a million wrong things,

and shrunk from the right one, they would be only so much the worse.

If there is local swelling, and signs that an abscess is forming, then treat as recommended for ABSCESS.

Inflammation of the Bowels.—*See* BOWELS.

Inflammation of the Brain.—*See* BRAIN. *See also* KNEE ; LIMBS, INFLAMED ; LUNGS, etc.

Inflammatory Outbreaks.—Sometimes a severe outbreak and eruption will occur in and around the nostrils or lips, and spread over the face. (If of the nature of erysipelas, treat as under that head.) In ordinary cases, there is need for more than local treatment, as it is probable that more or less failure in the skin exists. Also the feet will be most probably cold and damp. Let these be bathed (*see* BATHING FEET), and dried. Then rub them with CAYENNE LOTION (*see*) for some ten minutes, until in a glow of heat. Dry well, rub on hot olive oil, and dry again. Do this twice a day for a week. Warm and dry stockings must be worn. The skin of the back will probably be found dry and rough. Wash it down daily with SOAP (*see*) and hot water, and rub with warm olive oil. After a week of this treatment, probably the eruption will be much lessened. If it is still troublesome, apply cool cloths to the whole head, avoiding the sore parts, until it is generally cooled down and the skin softened, or the head may be, instead of this, packed in lather of the soap already mentioned. (*See* HEAD, SOAPING). For the sore itself, apply weak vinegar or *very weak* ACETIC ACID (*see*), and a little olive oil after. But it is best if it can be healed in such cases without any local application, through the general treatment of feet and skin.

Internal Relaxation.—Pain is often felt in parts of the back or sides which will yield to no medicine such as usually relieves. This most probably arises from relaxation and swelling of some internal part of the body, so

that there is more or less constant pressure on some nerves. It will be worse after fatigue or long standing, or any mental worry and excitement. This shows us that one thing necessary to cure is *rest :* entire rest if possible, if not, as much as can be taken. It is well to find out the *easiest* posture in which to lie, and spend as much time as possible in that posture. Seek, also, by applying cold cloths to the painful parts, to reduce the swollen tissue. There may also be required fomenting of the feet and legs (*see* ANGINA PECTORIS) to prevent chill during this cooling. Often pain in the urinary organs is due to nothing but this relaxation, and yields to such treatment. Rest, however, is a primary necessity in all such cases.

Itch.—*See* RASH.

Jaundice.—This disease, or its approach, may be known by several signs : a more or less yellow colour of the skin where otherwise white ; a yellowness of the whites of the eyes, and failure of the bowels to act sufficiently, with lack of appetite. It may come on gradually, or may be induced suddenly by some disgusting mouthful or sight which affects the nervous system, and through this the liver and stomach. Where a disgust, or, as the Scotch call it, a "scunner," is taken at any food, especially with children, they should never be forced to eat it. Jaundice may follow if they are so forced. Those having the care of children should always remember this.

The cure is found first in nursing the sympathetic nerves, by a fomentation for an hour of the whole length of the middle of the back, oiling before and after with olive oil. Four hours later treat the stomach and bowels in the same way. In another four hours foment the feet and legs similarly. All this time give a tablespoonful of hot water every ten minutes. Then rest for twelve hours, and repeat the cycle of treatment. During the twelve hours' rest, the hot water may be taken in sips, as desired by the patient. If there is pain in the region of the liver,

foment that region more strongly. If severe, place a bran poultice on above the liver, and keep it on all day, or even for twenty-four hours if the patient is comfortable in it. By the second day there should be a marked improvement.

Kidney Complaints.—*See* URINARY TROUBLES.

Knee, Swelling of, or Pain in.—For ordinary slight injuries, complete rest, and rubbing with spirit lotion, should be sufficient. But where there is previous weakness, or constitutional tendency, even slight pain and stiffness, caused by wet or some blow or wrench, the joint must be treated thoroughly. Careless and wrong treatment may be given, and result in severe lameness. We wish, however, to point out that the treatment here recommended has cured many cases where this lameness appeared hopeless, and even restored walking power in limbs which had been ordered to be amputated by surgeons.

In the early stages of the trouble, it should be easy to cure in five or six days. First apply the SOAPY BLANKET (*see*) at bedtime. Then, about eleven o'clock in the forenoon, place the leg so that the knee is over a small tub or bath full of very hot water, as hot as can be borne without pain. Pour this over the knee with a sponge or large soft cloth for an hour, adding hot water as it cools. If the patient becomes sick or faint, discontinue the bathing for a time. Dry the limb, rub with olive oil, and dry again gently. At five in the afternoon repeat the treatment of the knee. At bedtime sponge all over with hot vinegar, rub with hot olive oil, and put to bed. If the joint has been stiffened, gentle efforts to move it may be made during the treatment.

Sometimes during this treatment boils will break out over the knee and discharge a good deal, but as soon as their work in removing disease is done, these will heal up.

Generally, however, this will not occur. The diet may be such as we recommend in cases of ABSCESS (*see*).

In bad cases, the treatment may be continued for weeks before much favourable change is noted. Patience and perseverance, however, will win the day. The soapy blanket should not be given oftener than three times a week, and a rest from all treatment on the Sabbath is best. *See also* HOUSEMAID'S KNEE.

Often in cases of knee pain and trouble, when local applications have little power, a BRAN POULTICE (*see*) on the lower back will effect a speedy cure. Sensible people will, of course, study and apply fresh treatment in such cases. Where the knee, for instance, is in the *hot* stage of inflammation, hot applications will be injurious. In such a case, cold cloths on the knee, with bran poultice on the lower back, will be the proper treatment. Try heat first, and if it is hurtful, vary the treatment to cold and heat, continued as above.

Here, again, is a knee which gives its owner excruciating pain, and shows only a little swelling and no sign of diseased matter whatever. The hot fomentation and cold towels have both been tried, but there are now and again symptoms that show us that the root of the evil has not been reached. We try cold cloths on this knee, but they greatly increase the pain. We at length suspect that it is not the knee that is seriously diseased, but the root of one or more of the nerves that supply the link from the lower part of the spine. By this time the pain has returned into the knee dreadfully, and everything has failed. But very soon after a large, thick towel, folded and wrung out of cold water, having plenty of mustard spread on it, is placed across the haunches, relief is given in the most charming fashion. The cold cloth absorbs superfluous heat, and superfluous vital action to a certain extent, but the mustard draws it out so much more speedily and powerfully that the deep-seated roots of the nerves are reached and cooled down to their normal action.

The pain ceases, and the poor sufferer blesses the mustard. We are just describing what actually occurs.

Sometimes a prejudice arises against heat. If, for example, an inflamed knee has been strongly heated during the hot stage of the trouble, the pains and injury will have been greatly increased. But one way or other that hot stage of the trouble has been got over, and now without heat it is impossible to cure. The patient, however, and probably the nurse waiting upon him, are decided against all hot appliances. These do so much mischief that it is believed to be out of the question to try them again. It may be that the prejudice is so strong that you simply can do nothing; it may not be quite so invincible as that. If you are able to point out that it was only because the heat was applied at a wrong time, or in far too great strength, and that now, since the inflammatory power is spent, heat will be sure to have a good effect, if it is only carefully applied, the prejudice may be removed. We have seen a patient in this stage, and with both knees bad, wrapped in a large hot blanket fomentation from the ankles to above the knees; and he was constrained to exclaim, "That's the right thing, beyond all doubt." Then there is no more prejudice.

Sufferers should not be disappointed if for a week or two they are not sensibly better. In some cases the effect is apparent in four or five days, but generally a fortnight or three weeks pass without much encouragement. We see great despondency sometimes just before all pain disappears. Still, as a rule, the new health is seen in the cheek and eye very soon. Where a *violent* inflammation is obviously proceeding in the knee, the TURNIP POULTICE (*see*) is the best remedy. If there be great heat in all the body, there will be little or no need for heating any part; judgment must be used for each individual case in these matters. While resting as much as possible, the patient will find it best to lie on the back, with the sore knee supported a little higher than the body. A gently applied

bandaging of the whole limb is also very beneficial, and may be used for all weak limbs, even when the patient is walking about.

In the treatment of stiffened knees, even where accidental bending of the joint gives very great pain, it is a grave mistake to put the knee in splints to prevent bending. What is wanted is to encourage bending as far as that can be done without much pain, so that the joint may not permanently stiffen. Even where, by the use of splints, permanent stiffness seems to have been brought on, the warm-water treatment recommended above will bring about a loosening and softening of the joint, which will permit first of a slight bending, and then, with gentle encouragement, a complete flexibility. The *complete* restoration of the limb should be the object kept in view. No case of a stiffened joint, although it may be free from pain and disease, can be regarded as satisfactory, and hence treatment should be persevered in until all stiffness is gone. Common sense will direct as to hot and cold applications, when to apply each, and how long to continue either; the patient's comfortable feeling being the very best guide. We are glad to know of very many apparently hopeless limbs saved by our treatment, even where it has been imperfectly carried out.

Lacing, Tight.—This produces such serious deformity, and in many ways so interferes with the health of women, that we are constrained to write upon the subject. We find in cases which come before us that lacing, both of the feet and the waist, as practised by our women, has caused disease, and prevents our curing it. To begin with the lacing of boots. There is a certain form and size of foot which are supposed to be graceful. To obtain this, boots unsuitable in shape, and far too small in size, are used, and tightly laced down upon the foot and ankle, preventing circulation of the blood in these important parts. This causes corns and misshapen toes and nails;

but its bad effects are also felt throughout all the body. We have pointed out in other articles the great curative power of bathing or fomenting the feet. The tight lacing of boots produces exactly the opposite effect. It is as powerful to injure as the other to cure. Cold feet are the cause of many most serious troubles. To keep tight-booted feet warm is almost impossible. True neatness abhors all such mistaken treatment of the feet. Moreover, no supposed good shape, in body or feet, can ever produce the impression of beauty which good health never fails to give, so that the tightly-booted high-heeled girl or woman defeats her own object.

A yet more serious evil is the wearing of corsets. From this comes very much of the ill-health from which women suffer. The stomach, liver, and other organs are forced downward, their proper blood supply is cut off, and indigestion, constipation, headache and backache are the inevitable consequence. The pressure of these organs causes falling of the womb and the terrible troubles which employ two-thirds of the fashionable surgeons. These have not failed to denounce the folly which brings so many patients to them.

Dr. Herbert Snow, the great authority on cancer, and physician to the London Cancer Hospital, attributes almost wholly to the use of corsets the fact that for one man who dies of cancer two women die of it. The compression of the womb makes it specially liable to be attacked, while the rubbing of the hard edge of the corset on the breast sets up cancer there.

Besides its evil effects on the abdominal organs, the lungs also suffer, the ribs are prevented from expanding and so the wearer can never breathe as deeply as is necessary. The muscles of the abdomen and trunk are greatly weakened; indeed to this is due the fact that a woman who is accustomed to corsets has great difficulty in giving them up. She feels as if she would "come to pieces" if not supported by them.

A Normal Waist.

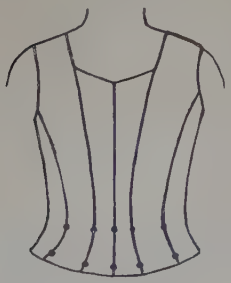
The exercises given in the appendix will help to restore tone to these muscles, and with perseverance in these, vigor and health will return, and the deformities such as flat or hollow chest, drooping shoulders, and protuberant abdomen, caused by muscular weakness, will disappear.

As we have said (*see* SKIN, CARE OF) clothing should be loose and porous in order that the skin may perform its functions. Corsets are both tight and impervious. The constriction of any part of the body by tight bands, and the hanging of the clothes from the hips, are highly injurious.

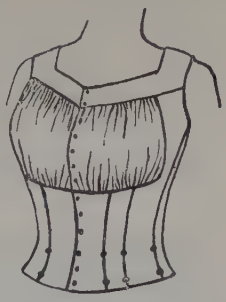
It is frequently urged that corsets are necessary if a woman is to have well-fitting clothes and a neat figure, but this is by no means the case. We illustrate a "good health waist" which has the advantage of allowing freedom of movement and respiration, producing no constriction of any part, and yet being well-fitting. Buttons are arranged, as shown in the illustration, to support the skirts so that their weight falls equally from the shoulders. This waist can be had from the Good Health Supply Department,

A Corset formed Waist.

451 Holloway Road, London, N., who will send particulars on receipt of a post card.



Good Health Waist (*back view*)



Good Health Waist (*front view*)

Lancing Swellings.—*See* ABSCESS.

Lather, How to make.—One of the most powerful soothing influences which can be had, is found in the lather of M'Clinton's soap, so often recommended in these pages. Applied to the skin over a stomach which has been rejecting all food, and even retching on emptiness, for hours, it will almost at once stop the irritation. Applied to the head it is invaluable (*see* BRAIN ; HEAD ; HEARING, etc.), and in many cases we have known it perform almost miracles of soothing effect. But the lather must be rightly made, and none but this soap used, if good results are to be got. Lather is first *Soap*, secondly *Water*, and thirdly *Air*, so wrought together to make a mass like whipped cream, or only a little more fluid. To get this, dip a *good* shaving brush in hot water, rub it on the soap a little, take another slight dip of hot water, and work the brush in the hollow of the left hand patiently, until you have a handful of fine creamy foam, sufficiently solid not to run like water, and yet as soft in its consistency as cream. There is in the hand just the temperature, consistency, and shape that are required for working the lather, and no dish can properly

replace it. The lather is to be gathered from the hand with the brush (a soft badger's-hair one preferred), and laid with it on the skin of the patient wherever necessary. Then another handful is quickly made, and so on until the required surface is covered. Or the lather may be transferred to a hot dish, placed over a bowl of boiling water, till enough is ready. After the application, a soft handkerchief may be laid loosely on, and, if the lather is to remain on as a pack, a dry covering put over this.

Lather ready for application.

In many cases where it is inconvenient to apply the lather direct to the skin, it may be spread on a warm cloth of soft and clean linen or cotton, and this laid over the part to be treated before it is cold. This will also apply where the patient is too weak to sit or lie in the position required for lathering the skin. A dry cloth must be put on the top of the soapy one, and all fastened on by proper wrapping. In cases, however, where the skin has to be lathered in order to soothe the nervous system or to allay irritation of internal organs, it is well, if at all possible, to apply the lather direct to the skin, as described above.

Lather of this soap, made in this way, may be spread on the most sensitive sores (when ulcers have eaten through both outer and inner skins) with only a very slight feeling of smarting to the patient, and with the most healing effect. It is very different with soda soap made in the usual way. When the skin of the head has got inflamed (as we saw in the case of a child the other day, where the back of the head was a matted mass of most distressing sores), it is charming to see the effect of this lather. We took a number of handfuls of it, and soaked the matted hair and inflamed skin till the poor child looked up with an expression of astonished relief.

Legs, Pricking Pains in.—Sometimes curious pricking pains are felt in the legs, becoming so severe as even to confine a patient to bed. Nothing can be seen on the skin, and no swelling or other visible sign of trouble is present. Evidently this requires treatment more particularly of the nerves, which go to maintain a proper balanced state of feeling in the skin where the pricking is felt. The patient must give up using alcohol in any form, and should rest in bed. In treatment we do not look to the skin itself, but rather to the nerves, to effect a cure. There is a failure at the nerve roots, and indeed the patient will usually be weak and nervous generally. A popular remedy in such a case might be arsenic, which must be avoided, as likely greatly to injure instead of help. The cure is in increased nutrition of the nerve substances, by rest and light dietary. *See* BISCUITS and WATER, DIET.

Limb, Saving a.—The proper growth of the body in any part depends on the power furnished by the nervous system and the cells of that part. This power enables these cells to use the nutritive substance in the blood for the formation of new tissue. By this process, growth in the healthy body is continuous through life, replacing equally continuous waste. But this all depends on a due

balance of power in the process. Suppose one eats more than can be changed into healthy tissue, the food may all go into blood, but the nervous power of the cells is insufficient to deal with it. Sluggish living in bad air, tobacco, or alcoholic drinks, will all cause this. Then some slight wound or bruise is received, and the overloaded blood fails to act healthfully and heal this. A sore is formed, most likely somewhere in the foot or leg, and the limb goes from bad to worse in spite of all efforts, while this *inequality* between the blood and the tissues continues. This goes on perhaps for years, and no effort is made to remedy it. Such a case may often be very easily cured, even where doctors pronounce it hopeless, if the patient will submit to proper regimen and treatment. Let the limb be thoroughly bathed, as far above the knee as possible, with water as hot as can be borne (*see* BATHING FEET). Pour into the water about half-a-pint of strong vinegar. Keep up the heat for an hour. Repeat three times each day—at 11 a.m., 4 p.m., and at bedtime. Rest from treatment on the Sabbath. When perspiration follows this bath, dry the patient all over, and rub with vinegar. Dry this off and rub with olive oil. Dry again, and put on clothes.

When we have to foment a foot or knee in long heatings or bathings, we find it well sometimes to cool the lower part of the spinal nerves, and remove all irritation of them.

Then for *diet*, let the patient go on good wholesome wheaten biscuits (*see* BISCUITS AND WATER) three times a day as food, and pure water, with no alcohol of any kind, to drink. And let him give up the use of tobacco entirely. Many times over, when limbs have been condemned by the medical men, we have seen them saved in this way. We have seen the same treatment save arms and fingers, reducing them from swollen and unsightly sores to perfect shape and complete usefulness.

Limbs, Disjointed, or Sprained.—In the case of an overstretch, or sprain, which has resulted in a hardened, swollen, and painful state of the muscles of the arm, bathe the arm in hot water, using plenty of SOAP (*see*). While the arm lies in this bath, gently squeeze it with both hands, so as to make the muscles work gently over one another, and the blood run out and in to the stiff parts. Care must be taken to avoid hurting the patient. No such effort is needed as to require great strength—only so much squeezing as urges the blood out of the part squeezed, and lets it in again when the pressure is taken off. Persevere in this for half-an-hour, dry, and rub with warm olive oil. Do this twice daily until the arm is restored.

In the case of a broken or disjointed arm, FOMENTATION (*see*) should be vigorously applied until proper surgical aid can be had to set the bones. Even where a joint has been a long time out, such fomentation persevered in will soften the part, and permit of proper setting of the bones. Cold is unfavourable—cold water a decided mistake in such a case.

Of course a surgeon should be employed; but if no medical aid can be obtained, a person who understands anatomy may replace a disjointed limb by fomenting and oiling the muscles thoroughly, and then watching for a time when they are relaxed, and when the patient's attention is not fixed on the joint. This is the moment to slip the bone into its place. If medical aid can be obtained, it is always safe, while waiting for the doctor, to foment the broken or disjointed limb. Also a wet compress worn over the disjointed limb will, with the fomentation, make it much easier for him, when he comes, properly to set the bones.

When two bones in any part of the body are disjointed, the cords and muscles which tend to keep them firm in their ordinary position usually draw the ends past each other so that they overlap. To get the joint right, the

bones must be drawn until the ends can pass each other, and then they must be brought into their proper position. Compare the disjointed bones with those same bones in a right position in some one's body, and thus you will see how they may be drawn right. There is a way of manipulating the muscles and tendons that in most cases renders it unnecessary to use much force, therefore the inexperienced should never draw forcibly. Sometimes a joint will repeatedly fail in this way. In such a case it may be supported ; but means must be used by hot fomentations to strengthen the joint, and general rubbing, especially on the spine, must be used to increase vital force.

Limbs, Drawn-up.—We have had many cases of contracted limbs, arising from various causes. Some of these have been completely cured, even when the tendons or *cords* which were contracted were going to be *cut* by medical advice. In one case, however, of which we knew, the medical man ordered the very treatment we employ.

In the first place we must have EXERCISE (*see*). This may be given by massaging the back and limbs with a gentle squeezing motion for half-an-hour twice a day (*see* MASSAGE). Use hot olive oil for this rubbing, and *persevere*. If the feet be sweaty, rub them with the CAYENNE LOTION (*see*). But the effective cure will be found in the careful and persevering rubbing and pressure.

Sometimes we find that a failure occurs in the large haunch joint itself, and that is not only shown by pain and stiffness, but by one or more sores that discharge matter, indicating that the bone is diseased. At the same time, the sinews of the limb affected give signs of contraction, and the heel soon refuses to come to the ground in walking. There is clearly a lack of vital energy, such as is wanted to heal the bone and nourish the leaders in this limb : this lack may have been showing itself for years. Apply the ARMCHAIR FOMENTATION

(*see*). Soon the sores begin to put on a healthier appearance, and ere long they heal up. With this and the rubbing, the sinews begin to relax and lengthen out, so that the heel comes nearer the ground. The limb may even have become smaller than the other, but it grows so as to come up with the healthy one: this will be the case though the fomentation is done equally to both. It is a curious thing that the body is so constituted that general healthy growth tends to bring on weaker parts more rapidly than stronger ones, so as to restore proper proportions. The new force applied to the roots of nerves on both sides of the spine does not make the healthy limb grow so as to keep in advance of the weakened one; it makes the weakened one grow so as to come up with the healthier. You do not therefore need to confine the fomenting to one side; it is better to apply it equally to both sides, and to leave the laws of the constitution to arrange all matters as to proportion. These laws never fail to do so perfectly. In the hands of a really skilful surgeon, much may be done to remedy diseased bone by the modern methods of antiseptic treatment and operation, but where these are not available, the above treatment has most excellent effects, and has sometimes cured where the surgeon has failed.

Limbs, Fractured.—It is not always easy to say definitely whether a bone is broken or not. In general, however, the following are signs of fracture:—(1) Loss of power in the limb; (2) Swelling or pain at the injured spot; (3) Distortion of the limb, usually shorter than natural; gentle pulling makes it temporarily regain its natural position; (4) When the limb is gently moved, it moves at some spot between the joints, and a grating sound is heard; (5) In case of a bone which lies near the skin, a touch will perceive the irregularity due to the fracture.

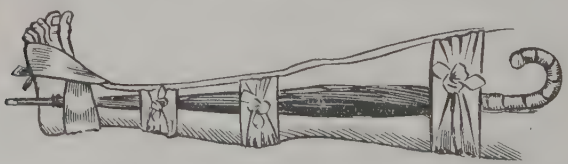
Pending the surgeon's arrival, if there is a fracture, do not attempt to move the patient till the limb is so secured

that the broken bone is prevented from moving. If the arm bone is broken, put one splint inside and another outside the arm, and tie two bandages, one on each side of the fracture. Sling the arm in a small arm-sling like the straw envelope of a bottle.

If the thigh be fractured, get a long splint, such as a broom handle or a rifle, placing it from the pit of the arm to the foot. Bandage around the chest, the hip bones, legs, and feet, and then by two bandages, one above and the other below the fracture.

A Broken Thigh.

If the leg bone or bones be broken, an umbrella makes a good splint. Another splint should be applied on the inside of the leg, the two firmly bandaged together, and finally the legs tied together.



A Broken Leg.

If the knee-cap[1] only be fractured, tie the leg on a splint from hip to foot, and keep the limb raised.

Almost any firm substance which can keep the limb at rest can be used for a splint, but if hard it should be padded. If the fracture is accompanied with severe bleeding, stop the flow first before attending to the fracture. (*See* WOUNDS.)

Limbs, Inflamed.—Entirely different treatment from the above is needed for such a thing as inflammation of the elbow, wrist, shoulder-joint or knee.

Say it is an inflamed elbow that is to be treated. We describe this; but similar treatment, with very slight variation, such as common sense will suggest, answers for the other joints.

Have two large plain towels wrung out of cold water, and folded so as to wrap six ply thick round the elbow. See that the patient is otherwise warm. Place one of the towels round the joint, and gently press it (avoiding pain) so as to draw the heat out of every part. When this is hot substitute the other, and continue with fresh cooling—for an hour if necessary. The cloth may require to be changed perhaps thirty times; but the guide to this is furnished by its heating. When hot, change it. This may be repeated frequently, until the inflammation is subdued.

Limbs, Uncontrollable.—This trouble is found in the double form; first, of limbs which will not move when their owner desires to move them; and, second, limbs moving in excessive jerks when they are not desired to do so. These cases are often combined, the limbs being rigid at one time and jerking violently at another. There is no wasting or unhealthy appearance. We have found this condition caused by excessive walking, running, and standing, combined with exposure to frequent wettings. The result is, in essence, that *motor* power in the limbs is in excess, while *controlling* power is defective: the case is indeed similar to ST. VITUS' DANCE (*see*). Bathe the feet (*see* BATHING FEET) in hot water, and apply cold towels folded and wrung out of cold water (but not iced) along the spine. Keep this up for an hour-and-a-half at a time. By that time the hard rigid feeling in the limbs will probably have disappeared, but great helplessness will be felt. You have removed the

excess of motor energy, and must now increase the voluntary energy. This will be accomplished by gently rubbing the back and limbs with hot olive oil, as in LIMBS, DRAWN-UP. This treatment, repeated daily, will usually soon cure.

Liquorice.—*See* CONSTIPATION.

Liver, The.—Where biliousness prevails, without any symptom of real liver disease, it is well first to look to the state of the stomach and bowels. Take a teacupful of hot water twenty minutes before meals, and the liquorice mixture (*see* CONSTIPATION) after meals. Then give a strong blanket fomentation to the feet and legs for an hour in the evening. If there be pain or feverish heat in the region of the bowels, press cold cloths over the painful part while the feet are fomented.

When the liver is really swollen, hardened, or painful, the pulse will either be quick with feverish symptoms or slow with coldness. If it be a feverish case, press cold cloths over the liver, changing them when warm, for an hour: at the same time foment the feet and legs as directed above. See that there is heat enough to make the patient comfortable under the cold applications. Inflammation of the liver will readily yield to this treatment.

When the case is a *cold* one with slow pulse, use no cold cloths, but apply fomentations over the liver, as well as to the feet and legs. Smoking and alcoholic drinks must be entirely given up—these habits are peculiarly severe on the liver. The treatment will not be likely to cure in a day or in a week, but patient perseverance with the fomentations should eventually effect a cure. Too rich food throws a great strain on the liver, and a plain and spare diet with prolonged mastication is necessary with above treatment if a cure is to be effected.

Locomotor Ataxia.—This disease is a most difficult one to deal with, and any healing is very slow work.

Patients past middle life are specially difficult cases, but we have known cure, or at least great mitigation in younger persons by the following treatment. Beginning, say on a Tuesday, let the lower back be well rubbed with hot olive oil, the patient sitting with the back to the fire, and well covered, except where being rubbed. Continue this rubbing for half-an-hour and not longer than three-quarters-of-an-hour. On Wednesday, soap the back well with soap lather (*see*) and after the soap rub with oil again. Next night, rub with acetic acid (Coutts's) full strength, until the skin is red and smarts moderately. Repeat this on Friday, and on Saturday and Sabbath do nothing. On Monday rub with acid again, and on Tuesday, etc., proceed as before. All treatment is best done at night, and the patient must be kept warm. He should also spend as much time as possible in the open air.

Lumbago.—Lumbago differs from both paralysis and cramp of the lower back in that it is not chiefly nervous, as these are, but is a trouble in the muscular substance itself. The muscles are either sprained or chilled, so as to have lost for the time their elasticity. Blistering, burning, and all such irritating treatment are only so many helps to the disease. The true method is found in gentle moist heating of the lower back by a BRAN POULTICE (*see*), not too hot, but renewed, if need be, for an hour each evening. Follow this up with a rubbing with hot olive oil. Wear a belt of new flannel round the body night and day in winter, or if exposed to cold. The treatment is simple, but if persevered in, cures most obstinate cases.

Lungs, Bleeding from.—This is usually taken as a most alarming, and even hopeless, symptom. It is not necessarily so at all, and even when a considerable amount of blood is lost, the patient may recover. Therefore, let friends not be frightened when this occurs, but bend their

energies to proper treatment, and all danger may be averted. All alcohol must be avoided ; it is most hurtful in such cases. Pack the feet and legs in a hot blanket FOMENTATION (*see*), and press cold cloths gently and equally over the chest or back where the blood is felt to be coming from : thus you stimulate the enfeebled nerves and brace the relaxed lungs at one and the same time. Relief will usually be felt at the end of two or three minutes. Continue the application till all pain and uneasiness are gone.

Before taking the legs out of the warm pack, dry the chest carefully, rub it with warm olive oil, and wrap it up in good new flannel. Then take out the feet and dry them well ; rub them gently and well with warm oil, put on a pair of soft cotton stockings, and allow the patient to rest. Squeeze an orange and give him an orange drink (*see* DRINKS).

When you have used this fomentation to the feet, and cold cloths once or twice, it will be well to place a large bran poultice across the lower part of the back, taking care again that this is only comfortably hot. When you have had the benefit of this once or twice, you may place a similar poultice between the shoulders ; but this only after you have so far succeeded in cooling down the inflamed lung or lungs, as the case may be. During the whole of the treatment it will be well to watch what is agreeable to the sufferer. It is not only that a certain treatment, or degree of treatment, comforts, but that it comforts because it heals. Move the patient as little as possible during treatment, and do and say all possible to soothe the mind.

The whole treatment should be gone over a second time within twelve hours. The second day give one application of the treatment only, and repeat once again the third day. Except for the first time, the treatment may be limited to half-an-hour. Avoid hot food or drink, but it is not neccessary to have it positively *cold*. This

treatment we have found perfectly successful in many cases.

Lungs, Congestion of the.—Treatment as below. Read preceding and succeeding articles.

Lungs, Inflammation of the.—This is a common trouble in our climate, and, fortunately, one not difficult to cure if taken in time and properly treated. It is usually the result of a chill, and is accompanied with pain and inability to breathe properly, distressing fever, and often delirium. To begin with, all its evils arise from the relaxing of the vessels of the lungs, so that these swell, and the excess of blood causes inflammatory action to supervene. To guard against it, then, those influences must be avoided which reduce vitality; where they cannot be avoided, all must be done to counteract them. Mere exposure to cold or wet, unless accompanied by exhaustion from hunger, or grief, or other influence of the kind, rarely causes this trouble.

Where the trouble has set in, the treatment is the same as recommended above in LUNGS, BLEEEDING FROM. If the patient be a very strong person, and the fever very great, the fomentation to the feet may be dispensed with; but if any uncomfortable coldness is felt, or the patient not above average strength, it should always be applied. No one who has not seen it can imagine the magical effect such treatment has. It is simple, but its efficiency has been demonstrated in a very large number of cases of cure.

Malaria.—Is now known to be conveyed by the bite of a certain kind of mosquito. Those who live in a malarious district should carefully exclude these from their houses, and by draining swamps and covering water butts prevent their breeding, which is always in stagnant water. If, however, exposure to infection cannot be prevented, much may be done to strengthen the system to resist it. Firstly, note that there is a great deal in the

Muscles of Back
(Surface muscles removed on right side exposing the deeper ones).

food and drink of a family compelled to live in such a district. If they live largely on animal food, and drink alcoholic liquors, they will seriously add to the power of malarial influence. The use of simple food and *pure water* will very much lessen it. Let us note that the very opposite of the popular superstition is the truth. A single glassful of gin, whiskey, or brandy, instead of "fortifying" against such infection, actually knocks down the "fortifications" which nature has reared against its power. These drinks, then, must be strictly avoided.

Massaging the Back.

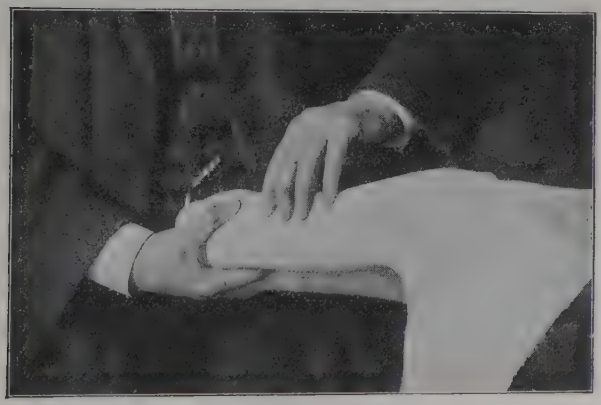
Massage.—This seems a very simple thing to do, but is by no means easy to do right, and it is very desirable that any one who can see it done by a qualified person

Massaging the Back.

should take advantage of the opportunity. The rubber must keep his attention closely fixed on the work, and though this is fatiguing to body and mind, it is absolutely necessary if the patient is to derive full benefit from the treatment. The skin should first be lightly rubbed with olive oil ; except in very special cases " friction " between hand and skin is to be avoided. The hand should move the skin to and fro over the muscles and bones beneath, and should be always elastic, so as to go easily in and out of the hollows, and avoid violent contact with projecting bones in the case of emaciated patients. The good rubber should know anatomy so far as to understand where bones and muscles lie (*See* DIAGRAM, page 216). An intelligent moving of all the muscles of a part is almost equal in benefit to gymnastic exercise, and can of course be given to those for whom gymnastics are out of the question. Yet such rubbing may fatigue a very weak patient, and care must be taken not to carry it too far at one time. There should also never be any hurting of the skin. Where the hands are felt too rough, the back may be covered with a soft cloth, oiled with olive oil. All *strong* strokes in rubbing the limbs should be directed *inwards* to where the limb joins the body. The lighter strokes should be outwards. It is always well to have a light and heavy stroke, as a joiner has in sawing.

As an instance of how to squeeze, let us take an arm that has got wrong somehow. If you take this arm between your two hands very gently, you feel that it is harder than it should be. The large muscles, even when the arm is at perfect rest, have a hard feeling to your hands, and not the soft, nice feeling which a perfectly healthy arm has. Probably the muscles have been overstretched, and sprained, or they have been chilled, and so have lost their elasticity and softness. Well, it will be so far good if you can bathe this arm in hot water. It will be better still if the hot water used is full of SOAP (*see*). You can make this bathing ten times more effective, if

you only know what is meant by a proper squeezing of the muscles. You use your two hands in the water of the soapy bath, and taking the arm between them, gently press the muscles between your hands, with a sort of working upon them that makes the blood in the stiff parts rush out and in, according as you press or relieve the pressure. If you can only get hold of the idea, it will not be difficult to do this right. It may be that the cords of the arm are not only hard, but also contracted, so that the arm cannot be straightened or bent as it ought to



Massaging the Arm.

be, but it is still so squeezable that you can squeeze the blood out of it, and it is still so elastic that when you relieve it of the pressure of your hands the blood rushes back into it. If this squeezing is kindly and slowly done, it will feel very pleasant, and very soon its good effect will be perceptible.

It is sometimes thought that there is some "magic" in one person's hands that is not in another's. Here is a case in which one person has rubbed, he thinks, perfectly right, and no relief has come. Another brings relief in a few minutes. It is concluded that some mysterious "gift"

is possessed by the latter. This may do well enough for an excuse when you do not care to have the trouble of curing your fellow-creatures, but it is not true. If we are to "covet earnestly the best gifts," it must be possible for all of us to get them. "The gift of healing" is surely one worth "coveting," and we think must be within reach, or we should not be told so to covet it. *See also* HEAD, RUBBING THE.

Massaging the Arm.

Measles.—An attack of this disease generally begins with a feeling of weariness. Then it appears as running and irritation of the eyes and nostrils, at which stage it is often taken for a common cold, the symptoms being very similar. Then this irritation spreads more or less over all the breathing apparatus, and finally the eruption appears in smaller or larger red patches, sometimes almost covering the face and other parts. The usual advice given is to keep the sufferer warm. It is good to do this so far as *avoiding chills* is concerned, but if the room be overheated and kept close and dark, only harm will ensue. The blinds of the windows should be kept drawn up to their full height, to admit as much *light* as

possible. *Fresh air* should be admitted by keeping windows open. If the patient complains of sore eyes, these may be shaded by a screen, but not by lowering the blinds. This admission of free air and light is a very great preventive of the "dregs" which form so troublesome a feature in measles. The room can easily be kept sufficiently warm by fire in winter, even if the window be open. The patient must not be allowed to read or use his eyes much, or very serious mischief may ensue.

When it first appears in eyes and nose, a good large BRAN POULTICE (*see*) should be placed at the back of the neck and down between the shoulders. Cold cloths should then be pressed over the brow and upper face. Do this for an hour. Give to drink lemon or orange drinks (*see* DRINKS), taken hot, and in small quantities at a time. If this treatment is well done several times, the trouble may possibly be checked at the beginning. Where it has gone further, and cough shows irritation of the air tubes and lungs, then foment the feet and legs while applying cold cloths over the chest, as in BRONCHITIS (*see*). If there be fever, and no signs of rash, then, to bring it out, pack in the SOAPY BLANKET (*see*). Where this cannot well be done, a most effectual pack is a small sheet wrung out of warm water and wrapped round the whole body, with a blanket wrapped well round it outside to retain the steam about the skin. But the soap is better. As a rule, there is not much need for further treatment when the rash fully develops. If, however, fever still remains, rub all over with hot vinegar. This is best done in the evening.

When all fever has subsided, a good rubbing of the *back only* may be given with warm olive oil. This may be done once a day. The feet should be watched lest they get clammy or cold.

For food, wheaten-meal porridge and milk food generally is the best. Do not give too much food at first, and keep the bowels well open.

Medicines.—The delusion that health can be restored by swallowing drugs is so widespread that we think it well to quote the following wise words from the *Lancet* :—

"An eminent physician not long deceased was once giving evidence in a will case, and on being asked by counsel what fact he chiefly relied upon as establishing the insanity of the testator, replied without a moment's hesitation : 'Chiefly upon his unquestioning faith in the value of my prescriptions.' It might perfectly well be contended that this evidence failed to establish the point at issue, and that faith in the prescriptions of a physician hardly deserved to be stigmatised in so severe a manner. But admitting this, there is still little to be said in favour of the sagacity, even if we admit the sanity, of the numerous people who spend money and thought over the business of physicking themselves, and who usually, if not indeed always, bring this business to an unfortunate conclusion. The whole tendency of what may be called popular pharmacy during the last few years has been in the direction of introducing to the public a great variety of powerful medicines, put up in convenient forms, and advertised in such a manner as to produce in the unthinking, a belief that they may be safely and rightly administered at all times and seasons, as remedies for some real or supposed malady. All this, of course, has been greatly promoted by column after column of advertisement in magazines and lay newspapers ; but we are compelled to admit that the medical profession cannot be held free from some amount of blame in the matter or from some responsibility for the way in which drugs have lately been popularised and brought into common use as articles of domestic consumption. Medical men have failed, we think, sufficiently to impress upon the public and upon patients that the aim of reasonable people should be to keep themselves in health rather than to be always straying, as it were, upon the confines of disease and seeking

assistance from drugs in order to return to conditions from which they should never have suffered themselves to depart. The various alkaline salts and solutions, for example, the advertisements of which meet us at every turn, and which are offered to the public as specifics, safely to be taken, without anything so superfluous as the advice of medical men, for all the various evils which are described by the advertisers as gout or as heartburn, or as the consequences of 'uric acid,' do unquestionably, in a certain proportion of cases, afford temporary relief from some discomfort or inconvenience. They do this notwithstanding persistence in the habit or in the indulgence, whatever it may be, the over-eating, the want of exercise, the excessive consumption of alcohol or of tobacco, which is really underlying the whole trouble which the drugs are supposed to cure and which at the very best they only temporarily relieve, while they permit the continuance of conditions leading ultimately to degeneration of tissue and to premature death. This is the moral which it is, we contend, the duty of the profession to draw from the daily events of life. The natural secretions of the human stomach are acid, and the acidity is subservient to the digestive functions. It cannot be superseded by artificial alkalinity without serious disturbance of nutrition; and the aim of treatment, in the case of all digestive derangements, should be to cure them by changing the conditions under which they arise, not to palliate them for a time by the neutralisation of acid, which may, indeed, give relief from present trouble, but which leaves unaltered the conditions upon which the trouble really depends. Those who look down the obituary lists of the newspapers will be struck by the fact that large numbers of people, in prosperous circumstances, die as sexagenarians from maladies to which various names are given but which are, as a rule, evidences of degeneration and of premature senility, while many who pass this period go on to enter upon an eighth

or ninth decade of life. The former class, we have no doubt, comprise those who have lived without restraint of their appetites, and who have sought to allay some of the consequences thence arising by self-medication, while the latter class comprises those who have lived reasonably, and who, if annoyed by imperfect digestion, have sought relief by ascertaining and by abandoning the errors from which it sprang."

Among the most pernicious and dangerous of all the patent medicines on the market are the so-called "Headache Powders," whose almost instantaneous effects testify to the potency of the drugs they contain. Such powerful agents carry their own condemnation, for they cannot in the nature of things *remove the cause* of the pain; hence their action is limited to narcotising the nerves. The disease continues, the damage goes on, but the faithful sentinels are put to sleep. These headache powders so increased the deaths from heart failure in New York City a couple of years ago that it became necessary to warn the public against them.

Memory, Loss of.—A more or less complete suspension of this faculty is a not uncommon form of mental and bodily illness. We do not so much mean the mere fading of past impressions as the loss of power to recall them, so that we cannot recall what we wish to remember. This is a result of any serious bodily weakness. It will come on through any exhausting exertion, or prolonged and weakening illness. Stomach disorder will also cause it. In this last case, drinking a little hot water at intervals will usually put all right. A cup of very strong tea will so derange the stomach in some cases as to cause temporary suspension of memory. We mention these cases to prevent overdue alarm at a perhaps sudden attack. The loss of mental power in such cases does not always mean anything very serious.

Just as the stomach affects the memory, so also much use of memory and mental strain tells severely upon the

stomach. Digestive failures in strictly temperate persons often arise from an overstrain of the mind.

We explain these two actions, the one of body on mind, and the other of mind on body, so that care may be taken, on both sides, of the complex nature we possess. If this is done, there will be little chance of memory failing.

Mind in Disease.—Often a person, because of physical failure, becomes possessed of an utterly erroneous *idea*, which no reasoning can change or remove. Indeed, reasoning in such cases is best avoided. Attention should rather be directed to the physical cause of the mental state, with a view to its removal. Very probably you will find there is want of sleep, with a dry hard state of the skin of the head, and too high an internal temperature. You may then work wonders by soaping the head (*see* HEAD, SOAPING). The back also should be soaped similarly. If too great a cooling effect is produced by this, wipe off the soap and rub hot olive oil on the back instead. If this is not sufficient, rub the limbs also with the hot oil. We have seen the most pronounced insanity yield to this treatment, where the cause has been *physical* and not mental. The secret of success is in so balancing the heat and cooling applications that the utmost possible soothing can be given without any chill.

Miscarriage.—An expectant mother should lead a quiet, orderly and healthful life (*see* CHILD-BIRTH). By this we do not mean laziness nor idleness, nor treating herself as an invalid. On the contrary, plenty of work, both physical and mental, and regular exercise are most beneficial, but care should be taken that work should not go the length of over-fatigue, and excitement, worry and anxiety should be carefully guarded against. The round of parties and other social functions into which many

brides are drawn, frequently becomes the cause of miscarriage and other troubles. Any excitement, mental or physical, is most injurious, and the husband and wife who sacrifice present enjoyment will be richly repaid afterwards in the greater vigor and healthiness of the child; while those who live for the present will often have bitter regrets of what might have been.

If any weariness, heaviness, or pain are felt in the region of the abdomen, groin, or back, half-a-day, a day, or a few days in bed should, if possible, be taken. If any appearance of bloody discharge be noticed, there is decided danger of miscarriage, and the patient should immediately go to bed, remaining, as far as possible, perfectly flat on the back until the discharge ceases. It is even useful to raise the feet higher than the head, by placing bricks or blocks under the feet of the bed. The covering on the bed should be light, only just what is necessary to keep one comfortable, and the windows should be kept open. Light food should be sparingly taken for a day or two; not much liquid, and nothing hot should be drunk. A towel, wrung out of cold water, placed over the abdomen or wherever pain is felt, and changed when warm for a fresh cold towel (*see* BLEEDING), will help to soothe the pain, allay the hemorrhage, and induce sleep. The mind should be kept at ease, for such precautions, taken in time, will probably put all right. After the hemorrhage has entirely ceased, and all pain disappeared, some days should be spent in bed, and active life be only gradually and cautiously returned to. When there is danger of miscarriage, purgatives should be avoided; a mild enema is a safer remedy, if needful, but for two or three days perfect rest is best, and if the food be restricted, the absence of a motion of the bowels will not do any harm. The patient should, of course, have the bed to herself.

Miscarriages most frequently occur from the 8th to the 12th week of pregnancy. The time at which the

menses would appear if there were no pregnancy, is a more likely time for a miscarriage than any other.

It should be remembered that miscarriages are very weakening and lowering to the general health, and to be dreaded much more than a confinement. The latter is a natural process, and, under healthy conditions, recovery of strength after it is rapid, while a miscarriage is unnatural, and is frequently followed by months of ill-health. Another thing to be remembered is that a habit of miscarriage may be established; after one, or more especially after two or three, there is likelihood of a further repetition of such accidents, resulting in total break-up of health.

Muscular Action, Weak.—The heart is the most important of all muscles. Sometimes the action of this is so weak that the pulse in the right wrist is imperceptible, and that in the left extremely feeble. The heart may be beating at the usual rate, only its stroke is much too feeble; and the effects are found in enfeebled life generally, sometimes shown in fainting fits. If such come on, lay the patient flat on his back, and if consciousness does not return shortly, apply a hot FOMENTATION (*see*) to the spine.

Sometimes this heart weakness is only a part of a general muscular failure. Muscles elsewhere in the body may even swell and become painful. If strychnine be prescribed, refuse it. It has only a temporary power for good, soon passing into a wholly bad effect. Thoroughly good vapour baths will effect some relief, and may be taken to begin with. The best remedy is found in gentle rubbing and squeezing the muscles in every part, specially attending to any that may be swollen and painful. Squeeze gently the muscular mass, so as to press the blood out of it. Relax the pressure again so as to admit the blood. Where no help can be had, we have known a patient so squeeze herself as to restore action to a useless limb. But

of course it is best if it be well and frequently done, say twice a day, by a really careful operator who has some idea of anatomy. This may seem a simple remedy, but we have known two inches added to the length of a shrunken limb by its means, and the patient restored from apparently hopeless lameness to fair walking power. *See* MASSAGE.

Muscular Pains.—These pains occur usually when a patient has been for some time in one position, sitting or lying, and rises suddenly in a particular way. They sometimes take such hold of the breast or back muscles as to make it appear as if some serious disease were present; even in the limbs they may cause great distress on any sudden motion. They may arise from a gradual *overdoing* of the muscles concerned. They are similar to what is commonly called a sprain, but as they are *gradually* produced their cause is often overlooked, and needless distress of mind caused by taking the pain for that of cancer or some such trouble. We write to point out that pains do not always mean serious disease, and before any one becomes despairing about their health, they should make sure they understand their case thoroughly.

These pains, too, refuse to yield to ordinary hot and cold methods of treatment. The remedy is found internally in half a teaspoonful of *tincture of Guaiacum* in a teacupful of hot water three times a day. After two or three days, a teaspoonful of the tincture may be taken in the cup of water. Continue until two ounces of tincture have been used. Or the tabloids of *Guaiacum and sulphur*, now found in our drug shops, may be taken, one tabloid representing the half-teaspoonful of tincture.

Externally, rub gently yet firmly the affected muscles with warm oil for ten minues or so once a day for a week or ten days. Of course, rest must be taken, and the overstress which caused the trouble avoided in future.

Mustard Oil.—Where this is recommended the cold-drawn oil is meant, not the essential oil. The latter is a fiery blister.

Narcotics.—The use of these to give temporary relief, often degenerating into a habit, causes so much serious disease that we have felt constrained to insert an article warning our readers in regard to it. The use of tobacco we have found a fruitful source of dangerous illness. It tends to destroy nerve power, and through this to relax the muscular system. It has a most dangerous effect upon the mind, relaxing the brain, and even causing some of its functions to cease. It hinders clear reasoning, and in many cases brings on incipient paralysis. It is a fruitful source of cancerous diseases of the mouth. It destroys keenness of vision. It is of no use to quote exceptional cases in such an argument. Great men have smoked, as some great men have habitually drunk, to excess. But that is no argument for the average man of whom we speak. The very difficulty he has in giving up the use of tobacco indicates a diseased state of the nerves, which no wise man will willingly bring on himself.

The effect of the continued use of opium, chloral, and many drugs taken to gain soothing or sleep is *dreadful:* so much so that we have seen patients who were deprived of them, after some time of continuous use, perfectly *mad* with agony. Let our readers remember that the relief given in using such drugs comes from a benumbing of the vital nerves. Their influence is *deadening*, and, if strong enough, kills as surely as a bullet. The wise medical man will, if he does administer such drugs, take care they are only taken once or twice. If a doctor orders their continual use he is to be distrusted. By all means let our readers avoid the terrible snare of ease and sleep obtained through narcotics. It is generally easy to give relief, in the various ways described in these papers, without resort to any such hurtful methods.

Suppose that you try a very hot application to the roots of the nerves affected, if you can guess about where those roots are. The doctor should help you to know this. The hot poultice is put on—we shall say it fails to relieve. Well, you put on a cold application at the same place. That relieves slightly. Whichever of the applications relieves should be followed up vigorously. Do not say, "Oh, it gives relief for a little, and then the pain returns." Follow up the little relief, and change from heat to cold as the pain or relief indicates. You can do no possible harm by such processes, and in multitudes of cases all will soon be right, and no opiate required at all. But you must not think all remedies at an end when you have tried one or two singly, and relief does not yet come. The large hot poultice may be put on the roots of the affected nerves, and ice-cold cloths placed on the branches of these nerves at the same time. Then the cold ice cloths may be placed on the roots and the hot on the branches. But remedies are not exhausted, by any means, when you have thought of two or three applications of heat and cold. The whole nerve system can be influenced by the rubbing of the head and spinal region, so as to wake up a strong increase of vital action in the nerve centres there. We have seen a patient who had been for months under medical treatment, and in agony except when deadened with narcotics, rendered independent of all such things by a little skilful rubbing alone. Perhaps you object that these remedies are "very simple." Well, that would be no great harm; but if they are so simple, you are surely a simpleton if you let your poor nerves be killed with morphia, while such obvious remedies are at hand. (*See* MASSAGE.)

Neck, Stiff.—For this, rub the whole back with soap lather (*see* LATHER; SOAP), and then with acetic acid and olive oil. Rub the neck itself as recommended for MUSCULAR ACTION.

Neck, Twisted.—This arises from the undue contraction of some of the muscles in the neck. It generally shows itself first in the evening, after the day's fatigue, and if neglected, or treated with blistering, iodine, etc., may become a chronic affliction. Yet it is not difficult to cure by right means. Opium should never be used. We have seen terrible suffering follow its use. The true cause must be attacked, which is an undue irritation of the nerve which controls one of the muscles, so that it contracts and pulls the head away. The nerves of the muscles which counteract this pull are also probably low in vitality, so that there is a slackening on one side and a pull on the other.

First of all, for a cure, there must be *rest*. Not more than three hours at a time should be spent in an erect posture, and between each spell of three hours let one hour be spent lying down. Avoid *all* movement while lying, as far as possible. Secondly, soap the back thoroughly with LATHER (*see*) at bedtime. Cover the well-lathered skin with a large, soft cloth, leaving the cloth and lather on all night, and covering over all with flannel in sufficient quantity to keep the patient warm. If the spasmodic twitching comes on, apply cold cloths repeatedly to the back of the neck for an hour in the morning. If this is felt too cold, apply for a shorter time.

If the neck has become hard and fixed in a wrong position, rub as recommended in MUSCULAR ACTION. This treatment has cured many cases.

Nerve Centres, Failing.—Many diseases flow from this cause, but at present we only consider one. That is where a "numbness" begins to show itself in fingers and toes, and to creep up the limbs. No time should be lost in treating such a case. It arises from failure in the spinal nerves, and these must be nursed into renewed vitality. This will be greatly helped by wearing over the back next the skin a piece of new flannel. Rub (*see*

MASSAGE) the back with warm olive oil night and morning, working especially up and down each side of the spine. Pursue this rubbing gently but persistently, but do not fatigue the patient, which may easily be done. Cease rubbing the moment fatigue manifests itself. Continue this treatment for weeks even, and also treat, as in next articles, *mind* as well as body. (*See* LOCOMOTOR ATAXIA.)

Nerve Pain.—*See* PAIN.

Nerve Shock.—After a fright, or some very trying experience, some part of the nervous system is frequently found to have given way. Heat is felt in the stomach. Then, if no treatment is given, curious feelings come on in the back of the head. Even inflammation of the stomach and brain may come on in severe cases. In any such trouble, alcoholic drinks, blisters, opium, and all narcotics are to be strictly avoided. These only lessen the already weak nerve power. Show the patient in the first place that there is no need for anxiety, the vast majority of such cases being easily curable by right treatment. We have seen this relief of mind alone effect a perfect cure. Therefore see to giving it. Wring tightly out of cold water two ply of new flannel, large enough to go round the lower part of the body, from waist downwards to hips. Put these round the patient, with two dry ply of the same flannel above them. Wear this night and day for a week or a fortnight. Keep the feet always warm and dry. Give plain, easily digested food. If St. Vitus' Dance shows itself, treat as directed under that head. Study the case in the light of all said on nervous troubles in these pages, and you will be able to cure almost any symptoms which may arise.

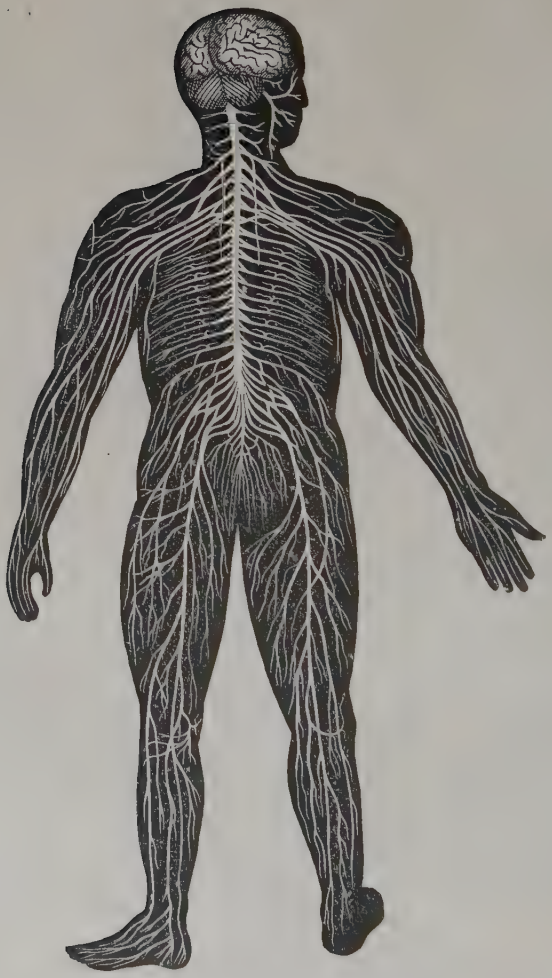
Nerves, Shaken.—By this we mean, not the nerve trouble which follows a sudden injury or fright, but the result of long-continued worry and overwork. Sleeplessness, great irritability of temper, depressing thoughts,

restlessness, and even a wish for death, are all symptoms of this trouble. In any effort to cure it, the *mind* must be largely considered. Thoughts of the constant care of a loving, Divine Saviour for even the least of His children, must be encouraged. Work, which is an intolerable burden when depressing thoughts are encouraged, will become easy when these are removed. If you get the sufferer made hopeful for time and for eternity too, you have half won the battle.

Again, in bodily matters, food or drink which is exciting must be given up, or very sparingly used. Tea should only be taken weak, and *at most* twice a-day. Avoid long conversations, and especially discussions and debates. Let the head be soaped (*see* HEAD, SOAPING) with soap lather at night, and rub all over with hot vinegar and olive oil before rising in the morning. Many a shaken nervous system will speedily recover under such treatment. Take also *eight good hours* for sleep, and allow no ideas of business or work to intrude upon them. No more valuable habit can be formed, by the healthy as well as by the nervous, than this. The whole will should resolutely be bent to remove the attention from every trying thought, when the hours of work are past, and especially on retiring to rest. Always recollect that this *can* be *done*; assert mentally, or if necessary, audibly, that it shall. Do not let initial failure disappoint you; persevere and a habit will be formed. When the brain gets a fair rest in its hours of leisure, it is usually equal to all demands in ordinary hours of work.

All brain workers, in their leisure hours should let the brain rest, and if they must do something, let it be as diverse from their work, and as easy on the thinking power as is possible. (*See* WORRY).

Nerves, Spinal.—The spinal cord is continuous with the back part of the brain. It is a mass of nerve fibres, and from it branch off in pairs, all the way down from



From "Furneaux's Elementary Physiology."

the brain, the great nerves which move the limbs and muscles of the body, and receive the impressions of sensation for conveyance to the brain. It is permeated by numerous blood vessels, which supply what is needed for the upkeep of the whole mass. When these relax, and become overfilled with blood, we have congestion of the spinal cord. This may often be easily remedied by cold cloths applied over the spine, with fomentations to the feet if necessary (*see* CHILDREN'S HEALTHY GROWTH; FALL; PARALYSIS; ST. VITUS' DANCE). If, on the other hand, the vessels are contracted, or the blood supply defective, we have great languor and coldness. This usually may be remedied by rubbing over the spine with hot olive oil. Violent heat, or blistering, simply destroys the skin, and hinders healthy action. Gentle heat, or gentle cooling, long continued, is the best treatment. Especially is this true in the case of little children (*see* CHILDREN'S HEALTHY GROWTH). For treatment of the nervous system, peculiar attention should always be paid to the point where all the spinal nerves enter and issue from the brain. This is at the hollow usually present at the base of the back of the skull, where it is jointed on to the spinal bones. Rubbing here is most powerful, either with acetic acid or olive oil, and hot or cold cloths should always be well pressed into the hollow, when applied to the head or upper spine. (*See* DIAGRAM, page 234).

Failures of muscular power are caused by failure in the spinal cord. If a child cannot walk, but only trails his legs, or if he cannot hold his head erect, skilful rubbing with hot oil on the spine will often quite cure the defects. Do not rub too hard. Feel for the muscles around the spine, and gently insinuate healing influence with your fingers, so as to reach the nerves below. Use a moderate quantity of oil, and the effects will be marvellous.

Nerves, Troubled.—Often a state of the nerves exists, without any apparent unhealthiness, which makes

the whole system so sensitive, that ordinary sights, sounds, and smells become unbearable, and the patient feels the ordinary round of experience, which would never be noticed otherwise, an intolerable burden. Strange feelings all over the body, and an indescribable series of seemingly "fanciful" troubles, come on. It is of no use, and indeed injurious, to treat such cases as merely fanciful. The wrong bodily condition must be righted if the mental condition is to improve. The first thing needed is *quiet*. Quietness rests the overstrained nervous system very much. Nerve-benumbing drugs are most hurtful (*see* NARCOTICS). Let the light in the room be subdued, and strong smells avoided. To rest the skin nerves, wear only Kneipp linen underclothing, and flannels *above* this if required. Bathe the tongue and palate by taking mildly warm water into the mouth and ejecting it again. Soap the head, and all over the body, if it can be done without chilling, three times a week. (*See* HEAD, SOAPING ; LATHER, etc.).

Nervous Attacks.—What we call, for want of a better name, "nerve force," or "nerve action," is at any one time a definite quantity. In health it is distributed to all the sets of nerves equally, so that all work in harmony. But if its distribution be altered in certain ways, we find "fits" or "attacks" coming on. Action is greatly exaggerated in one part, and as greatly lessened in another —hence violent movements and complete unconsciousness co-exist. Children often have such fits. Where they arise from *indigestion* as a result of bad food, the cure is found in teaspoonfuls of hot water, and a hot sitz bath coming up over the bowels. Where bad blood causes the fits, poultices over the kidneys will usually help greatly. (For fits of teething children, *see* TEETHING.) *See also* EPILEPSY.

Nervousness.—This frequent and distressing trouble is to be traced to a state of the nervous system in which

sensibility has got the upper hand, and self-control is partly lost. It is difficult accurately and briefly to describe, but is an easily recognisable state. Firstly, then, we say this is a physical trouble, and the patient must not be blamed for it, but encouraged kindly to make every effort of *will* to throw it off. A strong will can be cultivated, just as a strong arm, by *exercise*. Peaceful thoughts and Christian faith can also be cultivated, and anxious and disturbing ideas put down. Uniform, steady conduct on the part of all around is an enormous help to the nervous. For physical remedies, use no alcoholic drinks. These give temporary relief, but are fatal in their after effects. To cure nervousness is impossible unless these are given up. The physical treatment necessary will be found under NERVES, SHAKEN, and NERVES, TROUBLED.

Nervous Prostration.—Persons suffering from nervous prostration have probably allowed the urgency of seeming duty to drive them on in work till the vital energies have been fairly exhausted. At last they are completely broken down, and the very fountains of life are dried up. The brain itself has become incapable of giving sleep, or sound thought. But there is no need for despondency: this trouble is perfectly curable, only the right means must be employed.

In every case of real "nervous prostration," our question must be—How shall we enable this vital element to recreate itself? The answer is, with heat. Here we may detail the process which we know to be successful. Dip a four-ply cotton cloth in cayenne lotion, and lightly wring out. Lay this gently over the stomach and bowels, and over this an india-rubber bag full of hot water. All must be only hot enough to be comfortable. This application may remain on for two hours without any change, then it is repeated. Where no bag can be had, a good thick fomentation should be used instead. *See* NERVES, SHAKEN; NERVES, TROUBLED, and all articles on nervous trouble.

Much depends on consideration of the individual case, and careful thought and strong sense are needed on the part of all dealing with such cases. (*See* CHANGING TREATMENT.)

Dessertspoonfuls of light food should be given every half-hour, and increased in quantity as the patient can bear it. Avoid alcohol and all narcotics.

Nettle Rash.—This is an eruption on the skin, often coming suddenly and going off again, but sometimes of long standing. It resembles in appearance the sting of a nettle—hence the name. It is accompanied by an intolerable itching, and is a very sore trouble where it continues, or frequently recurs. Its cause is usually defective digestion. We should not depend on drugs for a cure, but treat first the whole spinal system. Rub the whole back smartly with vinegar. Wipe this off, and rub again with gentle pressure and warm olive oil. Put on the soapy cloth (*see* SOAP) with the lather very finely wrought (*see* LATHER), and free from excess of moisture. Over this lathered cloth put a good blanket FOMENTATION (*see*), changing it once or twice, so as to keep up the heat for half-an-hour. When all this is taken off, we should rub again with vinegar and oil, as at first. If the case is a sudden attack, we may soak the worst parts of the eruption with weak vinegar ; but if a chronic one, the rash is better left untouched. The treatment to the spine may be continued daily. If the rash has been irritated into running, scabby scores by scratching, it may be cleaned with weak vinegar. A little cream of tartar or powdered rhubarb and carbonate of soda mixed in equal parts may be taken internally after meals—say about one-fourth of a teaspoonful in a little water. If this quantity exercise too great a cooling effect, smaller doses will produce very good results. KNEIPP LINEN UNDERWEAR will in many cases of such skin trouble give great relief.

Neuralgia.—This is severe pain in one part or other of the body, sometimes followed by swelling of the painful part, but frequently without much sign of anything wrong at that point. It is, as the name implies, a trouble affecting the *nerves* which are connected with the painful part, and usually there is nothing whatever wrong where the pain is felt. Where, however, violent pain in the head or jaws results from chill, there is an altogether different trouble, though it is often called by the same name.

We have seen a man who had been in agony all night with pain all over his head. We took a large piece of flannel, about the size of a small blanket, rolled it up so as to get about a quart of boiling water poured into the heart of the roll. We kneaded the whole for a little time, to have the heat and moisture well diffused through the flannel. We now placed a large towel four-fold on the pillow under the patient's head, so that it could be brought as a good covering over the hot blanket when that was on. We opened up the blanket steaming hot and laid the head in the heart of it, bringing it carefully up all round, then brought the large towel over all, and tucked him tidily in about the shoulders. In less than two minutes he exclaimed, "I'm in Paradise!" The pain was all gone, and in its place was a positive sensation of delight. There was nothing here but a chilled skull to deal with, and as soon as it felt the heat and relaxed, the man was perfectly relieved. Then came the question as to how what had been got was to be secured, so that he might continue well. After he lay about three-quarters of an hour in this hot fomentation of the head, we took it off, and rubbed gently some warm olive oil into the roots of the hair, and all around the head and neck. We then gave all a good dry rubbing with a hard towel, and covered up his head carefully, and kept it covered for a day or two. He required no more treatment of any kind.

But when this treatment increases the pain, or fails altogether to remove it, we have a trouble which calls for the *very opposite treatment*. Then we have true neuralgia, which may be in any part of the body, and which is relieved by cooling the roots of the nerves which supply that part. For the face and jaws, cold must be applied to the back of the head, neck, or brain generally. For pains in arms, cold is to be applied to the upper, and for pain in legs to the lower part of the spine; for pain in the body, cool the whole length of the spine. The cooling is done by cloths moistened in cold water and well wrung out, pressed on gently over the part, and renewed as they grow warm. If the patient feels chilly, foment or bathe the feet and legs up to the knees during the process of cooling. This may require to be done for an hour. Finish by rubbing the parts cooled with hot vinegar and olive oil, and wiping off.

Even young people are exposed to a great deal of suffering from this source, and we feel sure that every one of these may be at once relieved and cured by the vigorous use of the cold compress. When the patient is warm in bed, the cold compress is one of the most delightful of applications; and the warm olive oil, to keep what has been got, make up a real blessing for the sufferer.

We have seen cases in which the cold compress has been applied up and down the spine, but not with that full effect which could be desired. Somehow it has not power enough in the hands applying it to reach the roots of the evil. The want in such a case is generally of a person sufficiently skilful in the use of the cold towel. There is a way of pressing it gently over all the parts under which the affected nerves lie, which secures the cooling of those roots very effectually. But such skill is not always at hand when needed. Well, mustard is spread over the surface of the cold towel, and the compress, thus increased in power, is placed all along the centre of

the back. We find that very soon the pain begins to moderate, and ere long it has ceased. If it has to be applied more than once, cayenne is greatly to be preferred. The pepper does not hurt the skin, the mustard very soon does. A cold damp towel, folded at least four-ply, and placed properly, after being sprinkled well with cayenne, has an excellent effect.

In wild toothache, or bad nerve pain in the head, massage all over the head for a considerable time will often cure. We know cases in which agonising pain was thus removed years ago, and it has never returned. There was first rubbing, in a gentle soothing way, over the whole head. At a certain point, that began to lose its soothing influence. The cold towel was then wrapped round the head, and gently pressed. As soon as it warmed it was changed. This was done for perhaps three or four minutes, and the rubbing repeated. The whole was kept up for about an hour. All pain and uneasiness were then gone, and there was no return of either.

It will be seen that it is essential properly to distinguish between the pain requiring heat and that requiring cold for treatment. In any case it is safe first to try the heat. Failing relief with this, the cold may be tried. Sometimes the cooling of the head and spine succeeds in driving off several attacks, but eventually fails to relieve. If in such a case the cold is applied over the stomach, there is frequently almost instant relief. Where the attacks can be traced to indigestion, or come on always a certain time after a meal, this is the proper method from the first. Where a decayed tooth is the cause of pain, of course go to the dentist.

Night Coughs.—These frequently remain as the so-called dregs of some illness, and are found very persistent. They are also frequently very alarming, as they are thought to indicate some trouble in the lungs, and as immediate steps should be taken to check this, it is well to

consult a good doctor. But, though coughing at night does of course accompany lung disease, it is by no means a chief symptom. Also, it is evident that the treatment applicable to bronchitis and other chest inflammations will often fail to relieve a night cough, because the night cough in question is due to nervous irritation or indigestion. Narcotics are useless and hurtful. Great relief is frequently found from inhaling the smoke of burning nitre or saltpetre. Blotting paper may be soaked in a solution of saltpetre, dried and lighted. Place the burning substance near enough the patient for him to inhale the smoke, but not so near as to interfere with *easy* breathing, especially in cases where there is great weakness.

When patients are fairly strong the back should be rubbed with warm olive oil for ten minutes or so in the morning before getting out of bed. Then apply a cold towel, well wrung out, folded lengthwise along the spine, and over it a dry one. Let the patient lie on this, and renew it when heated, continuing altogether for fifteen minutes or so. Give another fifteen minutes' rubbing with the hot oil before dressing. If the patient feels chilly during the cooling, foment the feet and legs at the same time.

Nightmare.—In serious cases of this trouble, the patient awakes some time before he gains any power whatever to move, feeling held as in a vice. But in common instances, the attack is entirely during sleep, and accompanied by frightful dreams. A heavily-loaded stomach, pressing on the solar plexus of the nerves, is a very common cause. The burdened nerves partially cease action, and this gives rise to the trouble. Anything similarly affecting these organic nerves will cause it also; but if the stomach be at fault, reduce the food and let the last meal be light and not later than six o'clock. This followed by a cup of hot water, before going to bed, will work a perfect cure. When it is feared there may

be an attack, *lying on the face* in bed will often prevent it, even if the patient so lies for a very short time, and then turns on the side again.

When students, or school children, are over-driven (*see* CHILDREN, various articles), nightmare, very persistent, is one of the symptoms. In such cases, there is *urgent need* of rest, or most serious consequences may follow. Treat as recommended in DEPRESSION, and if any nervous troubles show themselves, treat as in various articles on nerve affections. Bad dreams, especially with children, are a sure sign of something wrong with the health, and should always lead to investigation, that their cause may be found and removed.

Night Pains.—If these are of the nature of *cramps*, which come on while lying in bed, the treatment is similar to that given above as morning treatment for NIGHT COUGHS, only the cooling must be continued for three-quarters of an hour or longer, fomenting the legs if any chilliness is felt. Cold towels may also be wrung out before going to bed, and put within reach. These may be applied when the cramps come on. They will usually relieve speedily.

Spasmodic asthma may be relieved by the same treatment. It often comes on when lying down, and cold towels applied as above directed will generally relieve. Fomentations must be given to the feet and legs, if any feeling of chill is felt.

Where there is *difficulty in breathing* on lying down, usually the heart is at fault. Sometimes the heart is all right, and this hard breathing is nervous, caused by too sudden lying down. To lie down, propped up with pillows, which may be removed one by one, is often sufficient to cure it. The treatment in the morning as in NIGHT COUGHS will also greatly help.

Another set of night troubles are such as arise from unwise use of foods or drinks before going to bed. Tea

taken at or near bedtime will often cause sleeplessness, and will be apt also to give spasmodic asthma; so will all indigestible foods. These overpower weary organs that need rest and sleep, and not food. Most people will do well to take their last meal four hours before retiring. Taking supper is a habit, and in many cases a very bad one.

Night Sweats.—This distressing symptom, which accompanies various illnesses, can in most cases be easily cured. The whole skin is to be sponged over at bedtime with CAYENNE LOTION (*see*). This is best done under the bed-clothes. Acetic acid, the effective essence in vinegar, has an astonishing power in healing and stimulating the skin. When it is assisted by cayenne its healing power is very great indeed. The nerves are stimulated, the too open pores closed, the skin cleansed, and the whole system invigorated by such a mixture, and as a result the night sweats disappear. Even where the case is hopeless, much suffering may be prevented by the use of this mixture. In conjunction with other treatment, its use may even turn the scale towards recovery.

Noise and Disease.—Perhaps nothing shows more the lack of human feeling in many people than the manner in which they inflict sore distress on the sick and dying by means of noise. Moreover, recovery is retarded, and has sometimes been wholly prevented, by nothing but a *noise*. It must be understood that talking, and also singing, which are delightful to some, become intolerable pain to the delicate and weak. They really are *worn out* by them. And the wearing out is *real:* it is a destruction of nerve substance, when the nerve of the patient is already too feeble. Shutting doors violently, and the endless "house noises," must be avoided. Even a long, loud prayer at the bedside of the sick is utterly out of place. It may become necessary, in order to prevent such abuses, to exclude from the sick-room some

who will be greatly offended thereby; but courage to defend a patient against well-meaning intruders is one essestial qualification of a good nurse. Oil doors that *squeak*, fasten windows that *rattle*, but above all keep quiet the tongues that *clatter*. Let all whispering in the sick one's hearing be avoided. Speak quietly but distinctly, so that the patient may not think you are hiding anything from him. Wrap the coals in pieces of paper, so that they can be put on the fire by hand, avoiding the noise of shovel or tongs.

No one has a right to do what distresses others, and especially when they are sick. This principle should guide action. Acting thus will give untold rest and ease to the troubled.

Nostrils, The.—The disease called Polypus, affecting the mouth or nostril with growths which are usually removed by force, is one of those troubles curable by proper use of vinegar or weak acetic acid. The extraction of the Polypi is painful, and we have ourselves seen them so completely cured, that it is a pity not to make very widely known a method of avoiding extraction. A small glass syringe or a "nasal douche" (rubber is best) should be got, such as may easily be used for syringing the nostrils, or gums, if the growth be on these. Syringe the growths well with vinegar or ACETIC ACID (*see*), so diluted with water as only *very slightly* to smart when it is applied. Use this slightly warm, and force it well up the nostril, so that it goes even back into the throat. This should be done for a considerable time: not so as to feel painful, but long enough to produce a decided effect, which remains on ceasing. Dry the nostrils with a little soft lint or clean rag, and force in a little fine almond oil. Do all this twice a day for a fortnight at least. In a bad case, a BRAN POULTICE (*see*) may be applied to the back of the head and neck, coming down over the spine between the shoulders.

Similar growths on other membranes, if accessible, may be cured by acid in a similar way.

This treatment is excellent for an ordinary cold in the head.

Nourishment.—Nothing is more required in healing than properly to *nourish* the enfeebled body. In its commencement proper nourishment demands a proper mixture of food and saliva. In fever, if there be little or no saliva present, food requiring much saliva to fit it for digestion only injures. This is the case with so-called *rich* foods, especially. Excessive thirst usually marks this deficiency of saliva. Always consider carefully the flow of saliva before feeding a patient in a weak state. Get the mouth to "water" somewhat before giving food. We have seen a cold cloth changed several times over the stomach start the flow of saliva almost miraculously, relieving the thirst, and prepare for nourishment which could not be taken before.

Going further into the matter, we see that very likely the stomach requires assistance to dispose of even well-salivated food. There may be a lack of gastric juice. In this case, frequent and small quantities of hot water supplied to the stomach will greatly help it. A wineglassful of hot water taken every ten minutes for two, four, or ten hours will be sufficient (*see* DIGESTION; INDIGESTION). It is well to think ten times of the readiness of the system to digest, for once of the food to be taken. If the stomach be either burning hot or cold and chilly, let it be cooled or warmed, as the case may be. Either use cold towels or give hot water as above, as the case demands. When it is brought into something like a natural state of feeling, you may then give food. The hot water will often not only prepare the stomach, but will start the flow of saliva in the mouth, and that even when the cooling cloth has failed to do so.

A medical man will, at times, forbid water, however thirsty the patient may be. He is not unlikely to be

labouring under a serious mistake. It may be just the want of water which is causing the very symptoms which he thinks to cure by withholding it. We never saw anything but suffering arise from withholding water from the thirsty.

Milk is a prime element in nourishing the weak. Mixed with its own bulk of boiling water, or even with twice as much, it is immensely more easy to digest. The simple water is of vast importance, and the milk mixed with boiling water is quite a different substance for digestion from the fresh pure milk. It is better to have a teaspoonful of milk and water really digested than a pint of rich milk overloading the stomach.

Many persons put lime-water into the milk to make it digestible. In doing so they put a difficulty in the way, in the shape of the lime. If one tries to wash his hands in "hard" water, he sees how unfit that water is to do the proper work of water in the blood and tissues of the body. Now, it is not difficult to meet this evil where the only water to be had has a great deal of lime in solution. Boiling this water makes it deposit much of its lime. If a very, very small bit of soda is mixed with it in the boiling, it lets down its lime more quickly and completely.

Alcoholic drinks—wine, porter, or ale—are often given as means of nourishment. They are hurtful in the extreme, as the spirit contained in them spoils, so far as it acts, both the saliva and the gastric juice. Rum and milk, sack whey, and other such preparations are equally bad, and have killed many a patient.

While suitable nourishment is necessary for the sick, great care should be taken to avoid giving too much. Often the amount of food the patient requires or can assimilate is *exceedingly small*. Injudicious attempts to "keep up the strength" by forcing down food that cannot be digested often destroy the little that remains, and remove the only hope of cure. (*See* also ASSIMILATION ;

BISCUITS AND WATER ; BLOOD ; BREAD ; BUTTERMILK ; CHILD-BEARING ; CONSTIPATION ; DIET ; DRINKS ; DYSPEPSIA ; FOODS ; HEARTBURN ; INFANTS' FOOD.)

Nourishment, Cold in.—If a person is in fever, and is burning with internal heat, a little bit of ice, sucked in the mouth, gives great relief. The relief is got in this way : the melted ice, in the form of water, is little in bulk in proportion to the heat which is absorbed in melting it. To absorb the same heat by means of merely cold water, would imply a great amount of water, and an inconvenient filling of the stomach. The heat used up in melting the small bit of ice is great, and the amount of water exceedingly small. This gives benefit without inconvenience ; hence, to suck a bit of ice is to be much preferred in such a case to taking a drink of cold water.

Within proper limits, beyond all question, cold is, in certain cases, essential to nourishment. For example, in a case of thirst such as we have noticed, the heat of the stomach extending to the mouth is drying up all the juices that should go to secure digestion and assimilation. The saliva is dried up, and the gastric juice equally so. Cold is applied to the pit of the stomach (not ice, but a moderate degree of repeated cold), and the result is, these juices begin to flow. Nourishment is the consequence, and very clearly, in such a case, it is the consequence of cold. In other words, it is the result of reducing the excessive internal heat, and leaving something like the proper degree behind.

The place which cold has in nourishing is, so to speak, negative—that is, it is useful only in reducing overheating. But when we remember how a frosty morning sharpens appetites and makes the cheeks glow with ruddy health, we see that such reduction of overheat is not unfrequently required.

Nourishment, Heat in.—Heat is absorbed in building up the bodily tissues, and given off when they are disinte-

grated. To rightly understand this is of great importance in all treatment. When a living substance is growing, it demands heat. An illustration of this is the sun's heat causing what we call "growing weather." Again, where substances are breaking up, as in burning wood, heat is given out. In the stomach, a certain amount of heat is needed during digestion. If it is not given, indigestion ensues. To swallow ice, where the stomach has already insufficient heat, is then great folly. On the other hand, to take hot water is to do the very thing which gives the stomach what it needs, and so to relieve the indigestion. Many times, when the stomach simply stands still from lack of energy, it will move immediately on getting a glass of hot water to help it. Similarly, a little genial heat assists other failing organs. As we have shown how cold diminishes the excessive action of inflammation and fever, so we now point out that if you can find out what organs are feeble and acting insufficiently, and stimulate them with gentle heat, you are on the way to a cure.

Nursing Over-.—Few vital processes are more remarkable than that by which food fitted for adults becomes in the mother's breast food fit for the little infant. In nursing it is well to remember that all food is not equally fit to be so changed. Well-boiled porridge, of either oat or wheaten meal, is probably as good as can be got. Malt liquor, though causing a large flow of milk, most seriously deteriorates its quality, and should be entirely avoided. But in this article we think chiefly of the mother, and of the necessary drain of blood and vital force which she bears in nursing. In most cases this drain is easily borne, in others the child is fed at the mother's expense. The supply of power, in such cases, is not equal to the loss of it in feeding the child, and the reserve in the mother's body is slowly used up. She becomes thin and pale, and her nervous system begins to suffer. When this is the case, either means must be used

to increase her vital power, or nursing must at once be given up. Of course, where she may have had insufficient or unsuitable food, a change of diet may work a cure; but, as a rule, the drain of nursing will have to be stopped. To help her restoration, whether she ceases to nurse or not, use the following mixture and treatment: Boil a stick of best liquorice for half-an-hour in a quart of good soft water. Add one quarter of an ounce of camomile flowers, and boil for another half-hour. Keep the water up to the quantity by adding *boiling* water as required. Strain the mixture, and give a dessertspoonful thrice a day before meals. If the dessertspoonful be found too much, a teaspoonful may be taken. The patient, if any heart trouble is felt, should go to bed early, and have the feet and legs fomented, and cold cloths pressed over the heart. This may be done for three or four nights. After this, each night for a fortnight the back should be well washed with SOAP (*see*) and hot water, and rubbed with vinegar and hot olive oil. Let each be dried off before the other is applied.

Oil, Olive.—A little oil only should be applied to the skin at once. Any such *smearing* as dirties the clothes or bedclothes is quite unnecessary.

Since the first edition of these papers was published, the use of oil in the "massage" treatment has become so widely known that methods of rubbing are better understood, and its results more appreciated. Hence it is now easier to procure pure oil, and our readers should be able to get it cheaply at any first-class grocer's.

Opium.—*See* NARCOTICS.

Oranges.—Some things regarding this useful fruit require to be noted by those using them in sickness. To eat the whole substance of an orange except the outer rind is to give the digestive system some hard work.

We have known most serious stomach disturbance caused to the healthy by doing so. Some parts of the inner rind and partitions of the fruit act almost like poison. These should always be rejected. The juice is most beneficial. It is best given to patients by squeezing the orange into a glass, and *straining* it through muslin into another glass. Add its own bulk of water and a teaspoonful of sugar, if liked. This may be taken warm or cold, and will do where even milk and water cannot be taken. (*See* DRINKS).

"**Outstrikes.**"—These appear on the skin from various causes. In the case of infants, they often appear on the head and face during teething.

An experienced medical man is cautious in the extreme of quickly healing the distressed skin. He is afraid of "driving in" the eruption on the brain. Perhaps he refuses to do anything whatever to heal the head. From what we have seen, however, even in the worst cases, when head and face and neck were one great sore, we feel assured that there is no need why this distress should be continued at all. It may be, at least in many cases, safely and not very slowly healed.

The *whole* skin of the infant must be brought into vigorous and healthy action. The head at first need not be touched; but the entire skin not affected should be sponged with warm vinegar, and then dried, rubbed with warm olive oil, and this wiped off carefully and gently, so far as it does not adhere to the skin under the soft dry towel. Quite enough remains to do all the good required; and if more is left on, a chilliness and nastiness are felt, which prejudice many against the use of it altogether.

It is well, in many cases, not to touch the child with *water* or *soap*. The vinegar and oil cleanse the skin and do all that is required. Then vinegar very much diluted should be used warm to apply with a soft rag to the

sores. Take a teaspoonful of vinegar in a breakfastcupful of warm water. If this causes the child to cry when applied, then dilute still further. Vinegar weak enough to cause hardly any feeling when it touches the sore, will *heal;* stronger vinegar will *injure.*

We have known a nurse try to heal an outstricken face by means of good vinegar at its full strength. She was instructed to use the vinegar very much diluted, but fancied it would heal faster if much stronger. She might just as well have fancied that it is better to put one's cold hands into the fire than to hold them at some distance when wishing to warm them. The child's face was made greatly worse, of course, and the cure abandoned. It is therefore necessary to urge that a strength of acid which secures only the most gentle sensation of smarting is essential to cure. The weak vinegar is first applied to the outer and less fiery parts of the outstrike. Try to heal from this inwards, by gradual advances from day to day. On the less affected parts the weak acid may be applied twice a day; on the sorer parts only when itching is so distressing as to demand it.

We have seen a child whose head, face, and neck were one distressing sore; we have taken the cloth with the diluted vinegar and daubed a square inch or so of the skin on which the fiery eruption was so full, and in less than two minutes we have seen the colour change into a healthy pink, and remain that colour when the olive oil was applied. The child's sores yielded gradually, till the whole illness was removed.

Sometimes such eruptions, in adults as well as children, arise from suppressed perspiration, or from the perspiration being of an acrid and irritating nature. It is sometimes apparently the result of the rubbing off of a little of the skin, or it comes on without any known accident. For a time it seems scarcely worth noticing, and is consequently neglected; but gradually it spreads on the surface and gives uneasiness, especially after the patient has

been some time in bed. It goes on till a large portion of the skin from the knee to the ankle is reddened and roughened with a moist eruption. Now remedies of various kinds are tried, but the evil gets worse and worse. The person affected is often a struggling mother or widow, who has to keep on her feet all day in anxious toil, and neither gets very good food during the day nor proper rest during the night. Month after month goes past, and no relief comes. The positive agony which such persons suffer is incredible to those who have not experienced anything of the kind.

Here the great difficulty often is to get the patient the very chief condition for cure—that is, perfect rest for the affected limb. If this can in any way be secured, all else is comparatively plain sailing. But this is sometimes impossible : the children may not be in a position to be left, or the little business cannot be allowed to die, as it would in a month's time if not attended to, or some other hindrance is in the way. We must just do the best in the circumstances. We shall say that we are compelled to do without the rest, probably also without certain other things. Rest is very desirable, and so is a gentle rubbing all over the body, first with warm vinegar and then with olive oil, but there is perhaps no one capable of doing such a thing whose services can be secured. It is easy to "order" very useful processes, but among many who would not be exactly called "poor people" it is not easy to have the "order" carried out. We must often do without this double rubbing, and yet cure the diseased skin of the afflicted limb. Let the reader remember that it is no matter of choice that we dispense with the rest and the rubbing. If they are possible, by all means let them be taken advantage of to the utmost.

For treatment, unless distinct running sores are formed, bathe the limb with warm water and M'Clinton's Soap, which will remove all crusts, scabs, &c. Then apply zinc ointment. Do not bathe or poultice after the first time.

All secretion can be removed by a piece of cotton wool dipped in warm olive oil. If deep running sores have formed, then we must have a water-tight box of rough deal in which the whole leg up to the knee can be bathed for an hour in hot water. We see no reason why it should cost much over a shilling to get this, and it would be a sore want if it could not be procured. It is so made that the leg and foot can rest easily in it while it is nearly full of hot water. It need not be wider than just to hold the limb easily. Some good-hearted joiner will put five small boards together so as to meet this want. We shall suppose that it is supplied. Now for a few cloths, such as will cover the diseased parts, about three-ply all round. Then for vinegar or acetic acid, so diluted with water that it will just cause a slight smarting when heated and touching the affected skin. It must not be so strong as to cause burning, nor so weak as to give no sense of its presence at all, but between these extremes. It can be tried when too weak, and vinegar or other acetic acid added till a gentle smarting is felt. The cloths are dipped in the diluted and heated vinegar, allowed to drip till no more falls off, and then laid tenderly all round the sore. A strip of dry cloth may then be wound round so as to keep these on, and the leg thus dressed placed in the bath. It should be kept there, with now and again a gentle movement, and the strong comfortable heat of the water kept up for an hour, unless the patient should feel sickness before that time. If this comes on, the water is too hot; but, instead of merely cooling it, the bath may cease for the time, and water not so hot may be tried on a second occasion. Whether the hour has been reached or not, good has been done. The leg is taken out of the hot water and gently dried—not rubbed, but dried without rubbing. Then as much cloth as will go twice round all is dipped in warm olive oil, and this is pressed out a little, so that it may not run. The oiled cloth is wrapped all round the

limb. Some dry cloth is also wrapped round, and the first treatment is completed. This should be repeated every night before going to bed, for a week at least. It may be required for a fortnight if the case is bad and no rest at all can be had during the day. We should say the cure may fail for want of this rest, but this is not likely. In the morning as soon as convenient, the diseased skin should be soaked with a warm vinegar cloth, so that it shall smart just a little. It should then be dressed again with the warm olive oil. If at any time during the day or night it gets irritated and troublesome, this morning dressing may be repeated. It will not be very long before the one leg is as good as the other. The general health, too, of the patient will be sensibly improved.

It is scarcely necessary to point out that a similar treatment to this will cure "outstrikings" of the same sort in the arms and other parts of the body, as well as upon the legs. There is required only some such modification of the appliances as may meet the particular case. For example, we have seen the outstriking between the shoulders, so that it could not be reached by bathing, unless by appliances utterly out of the question in the circumstances. But dressing with hot vinegar cloths, allowing these to remain on for twenty minutes or so, and then dressing with warm olive oil, allowing this to remain for two or three hours, is quite possible to any one who is so affected ; and this will usually be sufficient for a cure.

You have, perhaps, been cured temporarily more than once with arsenic, and the evil has returned worse and worse. In that case you may require all the more patience and the longer application of the above treatment; but, once cured in this way, you will not, so far as a good long experience enables us to judge, be likely to have any relapse. In very bad cases we have seen poultices of mashed potatoes made with buttermilk cleanse the diseased parts most effectually, and then the acid takes healing effect very

speedily. In these cases ordinary medical treatment had utterly and hopelessly failed.

Pain, Severe, in Limbs.—This is often not due to any trouble in the joint itself, but to some disorder in the large nerves which have their roots in the lower part of the back. In the case of severe pains in the back of the leg, ankle, or knee, when a chill to the large limb nerves has been the cause, and has raised inflammation, the patient should be put warm in bed. Take two large towels, thoroughly wrung out of cold water. Fold one six or eight ply thick. Gently press this, avoiding cold shock to the patient, over the lower part of the back. When this towel gets hot, spread it out to cool, and apply the other. Continue this with each towel alternately, and when finished, or after an hour, rub the skin with warm olive oil and cover up with new flannel. Similar cold applications to the *upper* part of the spine will cure such pains in the wrists. If the cold application intensifies or fails to relieve the pain, it is well to try the ARMCHAIR FOMENTATION (*see*).

Sometimes light pressure in the form of squeezing the muscles of the lower back is very useful. A very gentle pressure on the right parts is most pleasant to the sufferer. At first it simply relieves in some degree the weary feeling of the limbs. When it is at all well done, it soon raises a gentle heat, which slowly passes down the limbs, even to the very toes. This is just life itself communicated to the limb. But we must not confine our treatment to the spinal cord. The squeezing, or gentle pressure, must be carried down the limb ; and when new life has been infused so far, it will be well to apply the pressure between the hands to the swollen and painful part. *See* MASSAGE.

Palpitation.—Ordinarily we are not aware of the beating of the heart, enormous as is the work it does ; but in certain cases this beating becomes distressingly

violent, especially on lying down flat or in ascending hills or stairs. The latter cases are the more serious, yet both kinds we have found quite curable. In treatment, fomentation must be avoided, and so must doses of the nerve-damaging drug, digitalis. The best way is to *cool the heart*, and thus relieve its superabundant action. But care must be taken that *cold be not applied to a feeble heart*, but only where action is evidently superabundant. It is usually easy to distinguish the two kinds of palpitation. The cooling can be done by pressing towels wrung out of cold water all over the heart region of the left side. Then rub the part so cooled with olive oil, dry off, and let the patient rest. This may be done in the morning before rising. In cases where the heart is feeble, the following treatment should be carried out instead of the cold towels :—Begin at bedtime with a cloth covered with creamy soap lather, and placed quite warm all over the body of the patient. It should be fastened on with the body of a dress, or thin vest, so that it may be kept close to the skin during the night. In the morning the back should be gently washed with hot vinegar, dried, and gently rubbed with warm olive oil. In those cases where the palpitation is only part of a general nervousness, which causes great distress and sleeplessness at night, the back should be lathered all over with soap (*see* LATHER and SOAP) at bedtime, and the cloth with lather left on all night. In the morning, dry off, rub gently with hot vinegar, and then with hot olive oil. If the palpitation resists this treatment, then cold towels should be gently pressed to the *spine*, until the whole system is quieted. The back should then be rubbed with warm olive oil. So far as this restless action is concerned, this is all that is required for complete cure. We are writing thus in view of cases declared hopeless, but the patients are now in perfect health. We remember one at this moment in which the heart's action was so bad that the head could not be raised from the pillow, but the person was in a few weeks as well as any one could wish to be.

No one who has not seen how readily the surplus vital action passes out of the system when simple cold is rightly applied, can imagine how easily such cases are cured. It seems to us absurd to speak of "heart disease" in many of the cases in which people talk of it and set the case down as hopeless. It is absurd, simply because it is not heart disease, but only a little more action than is comfortable, and which is reduced in a few minutes by a cold towel. No doubt care and willingness to work a little are required, if one would relieve a sufferer in such a case as this, but that care and energy are sure to have the best of all rewards.

Palpitation often arises from indigestion, in which case *see* INDIGESTION.

Palsy.—*See* PARALYSIS.

Paralysis.—This serious trouble in slighter forms affects one side of the face, or even one eye only. More serious attacks involve the arm, and even an entire half of the body. It may come suddenly, or may creep slowly over the frame. In very old persons the case is usually hopeless, as life itself is fading. In earlier life, and in less serious cases, a cure is to be expected from proper treatment. Cupping, blistering, or opiates must be avoided, as all tending to reduce vital energy. Treatment must aim at increasing this, not reducing it. Take first the case of paralysis slightly affecting the face. When the patient is warm in bed, place a BRAN POULTICE (*see*), not too hot, on the back of the head and neck. Let the patient lie on it, first rubbing the neck and back of head with olive oil. Do this for an hour each day. At another time wash the back of head and neck with SOAP (*see*) and water, then with vinegar, and finally rub with hot olive oil. Keep the parts warm with good flannel always.

If the whole side be affected, foment strongly the whole spine, and treat it in a similar way to the back of

the head, as prescribed above. We have known cases of comparatively speedy cure by this simple means. The heat simply vitalises the partially dead nerves. For paralysis of the lower limbs, the treatment is applied to the lower part of the spine principally, but also to the whole spinal system. There is no fear of injuring the patient in this treatment, and we know of many cases of most delightful cure secured by it. What is called the ARM-CHAIR FOMENTATION (*see*) is an excellent method of dealing with paralysis of the lower limbs or any part of them, and may be resorted to if the above treatment fails. Care must be taken in any case to avoid a chill after fomenting, which might make matters worse than at first.

Perspiration.—By this term we mean not only the sensible perspiration which is felt as a distinct wetness on the skin during exertion or heat, or in some illnesses, but also, and chiefly, the constant insensible perspiration. This latter is far more important than the former. No one could live many hours without it, for by its means several pounds weight of waste is got rid of every day. Its importance we saw lately in the case of a child greatly swollen in dropsy. A flannel BANDAGE (*see*) wrung out of warm water, placed round the body, reduced this swelling completely, without any *sensible* sign of excretion. A very gentle treatment, increasing this insensible sweating, will often cure without weakening, where violent perspiring medicines or treatment cause great weakness. A damp flannel bandage placed round the lower half of the body all night for a few nights will produce a remarkable increase of insensible perspiration, and in many case forms a good substitute for sweating drugs. Along with this the soapy lather may be used at bedtime all over the skin (*see* LATHER and SOAP). We have seen a swelling of the hand, which made a medical man talk of amputation, cured by these means. Acetic acid, or white-wine vinegar, rubbed over the skin, produces a similar increase of insensible perspiration, and may be

used without fear of injury. This done once a week will go far to reduce sensitiveness to cold. Indeed, the use of M'Clinton's soap and water, along with good acetic acid sponging once a week, will prevent many serious ills by securing a constant gentle excretion of hurtful waste through the stimulated skin.

Piles.—This very common trouble is caused by one or more of the veins in the lower bowel losing their elasticity, so as to protrude more or less from the anus, especially when the stress of a motion of the bowels forces them out. When no blood proceeds from this swollen vein, it is sometimes called a *blind* pile. If blood comes, it is called a *bleeding* one.

There are few illnesses more prevalent than this, few that seem to be less rationally dealt with, and yet few that are more easily cured.

It is distressing to think of what some poor people have to suffer from this disease, while they are still compelled to go on working, and even walking, in the most depressing sufferings. It is still more distressing to think of the painful operations which some have to undergo in having the relaxed portions of these veins cut out. Even when the piles have got to a very advanced stage it is not difficult to cure. It will generally be found that there is CONSTIPATION (*see*), so first of all, the bowels must be regulated. This may be done by means of liquorice and senna mixture, and strict attention to diet and exercise. Then the nerve action in the lower back is to be stimulated by applying to the back below the waist a large BRAN POULTICE (*see*). Rub the back after this with hot vinegar, dry, rub with olive oil, and wipe off the oil gently. Do this at bedtime. Into the bowels may be injected (with the fountain enema) first one or two injections of warm water; then an injection of warm water and white-wine vinegar. Be particular to have this mixture not too strong. A trial may be made

with one tablespoonful of vinegar to a pint of water. If any pain is caused, inject simple lukewarm water and use the vinegar and water next time weaker. A very weak mixture has a wonderfully healing effect. After one pint of this mixture has been injected, an injection of cool water (but not cold) should follow. The vinegar should be so weak that it will cause no pain, properly speaking, —only just the slightest sensation of smarting. It will be possible to use the water colder and the vinegar stronger as you get on with the cure, but in both, your own feelings and good sense will guide you. This direction will suit other cases of internal syringing, in which membranes have got relaxed, and need to be braced with cold and weak acid. In all such troubles it should be remembered that the warm or tepid water is used at first only because the cold might be felt uncomfortable till the surfaces are prepared for it. It is the cold that does the good. After this, protruding piles may be gently manipulated by the fingers and pushed back into their place. During this the patient must press outwards, as if to discharge fæces from the bowel. The anus will then open and permit of the piles being pressed in. The injecting treatment may be given twice a day. If too painful, even bathing the parts with the vinegar and cold water has great healing power.

Let the sufferer, if at all possible, have *entire rest* for a fortnight during the treatment, and lie down as much as convenient.

In mild cases, simply bathe the piles with cold water and press them back into their places. A daily wash of the anus with SOAP (*see*) and warm water, followed by a cold sponging, will do much to prevent piles.

Pimples on the Face.—*See* FACE.

Pleurisy.—The pleura is the tender double web, or membrane, which lines the inside of the chest on the one side and covers the lung, or rather encloses the lung with

its other fold. Each of the two lungs has its pleura in which it works, and each side of the chest is lined by one side of this sensitive organ. The slender lining passes round the greater part of one whole side of the body with one-fold, and round the whole of the lung with the other. Let us suppose (which often takes place) that the front of the body is defended with what is called a "chest protector," but the sides and back are exposed to a chilling atmosphere. Part of the pleura, and that part which is farthest from the surface, is sheltered, but the greater part of it, and that nearest the surface, has no such protection. In the case especially of women this is the state of things. It seems as if people thought that they only need to keep a few inches of the breast warm —that is keeping the chest all right—though the sides just under the arms, and the back under the shoulder-blades, are of far greater importance. The throat is even muffled, and a "respirator" worn, so that fresh air is not allowed to get inside the lungs, while the pleura is exposed to chill at the back, The consequence of this is that vital action is so abstracted from the pleura that the tension of its small vessels is relaxed, and blood is admitted as it is not intended it should be.

Severe pain is felt on one or both sides, and round under the shoulder-blade. A painful cough arises, and great fever is produced. In such a case the treatment is on the same principle as that given in LUNGS, INFLAMMATION OF THE, which should be read. The inflamed part must be cooled by applying towels well wrung out of cold water round the side, applying a fresh one when that on the part becomes warm. If the pain does not leave in half-an-hour of this treatment, or if the patient be weak to begin with, or if any chilliness is felt, pack the feet and legs in a large hot fomentation. The cooling of the side may then go on safely until a curative effect is produced. We may not be able to give the theory of action of this treatment, but we know that in

many cases it has perfectly and very speedily been successful, and that it leaves no bad results, as blistering and drugging are apt to do. We know of one case in which it took twenty-four hours' constant treatment to effect a cure. But it did effect it. Two friends took "shifts," and saw that all was thoroughly done. This will give an idea of the proper way to go about the matter.

Poisoning.—The following are the antidotes and remedies for some of the more common forms of poisoning.

ALCOHOL.—The patient is quite helpless, and there is usually a strong smell of alcohol. If the patient is intoxicated at the time give an emetic. If there is evident prostration from a long bout, keep him quiet and warm. Hot tea not too strong may be given.

ALKALIS (*e.g.*, ammonia, soda or potash).—Give dilute vinegar, followed by white of egg.

ARSENIC.—Emetic, followed by white of egg. Keep very warm.

CARBOLIC.—Readily identified by smell of tar or carbolic. Wash mouth well with oil. Give an emetic.

CHLORAL.—Emetic ; warm coffee, and even an enema of coffee. Artificial respiration (*see* DROWNING) may be necessary if breathing gets very low.

CHLOROFORM OR ETHER (inhaled).—Fresh air. Pull tongue forward, and begin artificial respiration. If heart has stopped, strike chest two or three times over region of heart.

CHLOROFORM OR ETHER (swallowed).—Emetic ; enema of hot coffee ; keep awake. If necessary, artificial respiration.

COPPER.—Emetic, white of egg to follow.

LAUDANUM.—There is intense drowsiness and contraction of pupils of eye. Give an emetic and plenty of strong coffee. Walk patient up and down. On no account allow him to give way to the desire for sleep.

MINERAL ACIDS AND GLACIAL ACETIC.—If any neutralising agent, such, *e.g.*, as lime, chalk, soda, or calcined magnesia, is at hand, give it at once. Or give an emetic, followed by oil or milk and water.

MUSHROOMS.—Emetic ; castor oil and enema.

NICOTINE (tobacco).—Emetic ; stimulate and keep warm ; keep patient lying down.

OXALIC ACID.—Neutralise by chalk or lime water, but not by soda or any alkali. Give plenty of water ; apply hot fomentations to loins.

PHOSPHORUS.—Often caused by children sucking matches. There is a burning in the throat, and often vomiting. Give an emetic. After this some barley water or milk may be given.

PRUSSIC ACID.—Almost hopeless. Emetic ; artificial respiration.

SNAKE BITE.—Suck the wound, and apply a drop or two of strong ammonia to the bite. Ammonia may be also inhaled. Artificial respiration often necessary.

STRYCHNINE.—Emetic ; keep quiet and darken the room. Chloral or bromide of potassium may be given. If spasms threaten respiration, artificial respiration is necessary.

TARTAR EMETIC OR OTHER ANTIMONIAL POISONS.—If vomiting is not present, induce it by an emetic. Give doses of strong tea. Keep very warm by hot blankets.

Good domestic emetics are a teaspoonful of mustard in a tumblerful of water, or a tablespoonful of salt in the same quantity of water.

Poisoning, Blood.—Where this arises from a more or less putrid wound, what is aimed at in the treatment is to stop the manufacture of the poison in the wound by cleansing and healing it. This done, the other symptoms will subside. The wound should be carefully brushed with a camel's-hair brush and vinegar or dilute ACETIC

ACID (*see*). This should be followed up with a poultice of boiled potatoes or turnips, beaten up with the same weak acid. Leave this on all night. Brush again well with the acid in the morning. In the matter of diet eat what will produce healthy blood, and by open-air exercise seek the same end. But the daily brushing and poulticing, or even twice daily if necessary, will work wonders on the poisoned wound. Care should be taken where any cut or wound has been made in the flesh, that it is carefully washed, and any dirt or foreign matter removed. Especially is this to be attended to if a rusty nail or penknife has inflicted the injury.

Polypus.—*See* NOSTRILS.

Potato Poultice.—Potatoes boiled and beaten up with buttermilk, spread out in the usual way, make this useful poultice. Weak acid or vinegar may also be used instead of buttermilk. The potatoes should be boiled as recommended below.

Potato, The.—The proper cooking of this root is so important for health, owing to its universal use, that we here give directions which, if followed out, make potatoes a dish acceptable to even a very delicate stomach. Difficulty of digestion often arises from the potatoes not ripening properly, especially in cold soil, and since disease has become so widespread. Their unripe juice is positively poisonous, and when they are merely boiled is not completely expelled. The potatoes should be *steeped* in warm water for an hour before they are boiled. The water in which they have been steeped will be greenish with bad juice, and must be thrown away, and the roots boiled in fresh water as usual, giving a thorough *drying* after the boiling water is poured or strained off. So prepared, the potatoes make a very digestible dish.

Poultice, Bran.—*See* BRAN POULTICE.

Prostration, Nervous.—The various articles under NERVES and NERVOUSNESS should be read. Here we give simply the treatment for failure in the digestion and bowel action. This arises from failure in the great nerve centres near the middle of the body. External treatment may be given as follows :—Dip a cotton cloth, four-ply thick, and large enough to cover the stomach and bowels, into CAYENNE LOTION (*see*), and lightly wring it. Lay this gently over the stomach and bowels. Over this an indiarubber bag of hot water is laid. Take care that the heat is not *too great* or the mixture *too strong*. All must be just hot enough to be comfortable. This application may remain on for two hours, and then be repeated. The cayenne is greatly to be preferred to mustard for many reasons. Give the most easily assimilated food possible. A teaspoonful of gruel each half-hour, increased to a dessertspoonful, if the digestion will bear it, and preceded in all cases by a tablespoonful of hot water. This should be continued for twenty-four hours. Proceed very cautiously then to increase the nourishment, on the lines of ASSIMILATION, DIET, DIGESTION, etc., giving oatmeal jelly, wheaten porridge, Saltcoats biscuits, and such diet, *gradually* bringing the patient back to ordinary food.

Pulse, Counting the.—Most valuable information as to the nature and progress of disease is derivable from the pulse. Every one should learn to count it, and to distinguish the broad differences in the rapidity and nature of the beat. Such a distinction as that between BRONCHITIS and ASTHMA (*see these articles*), which require almost directly opposite treatment, is at once discerned from the pulse. In bronchitis it beats much too quickly, in asthma it is natural or too slow. In many cases we have seen asthma, which in cough and spit is very like bronchitis, treated as bronchitis, with bad results. These would all have been avoided if the pulse had been intelligently

counted. Count the pulse, if at all possible, for *half-a-minute.* This multiplied by two will give the rate per minute, by which it is judged. If this rate per minute be above 100, there is a good deal of feverish or inflammatory action somewhere. If below 60, there is considerable lack of vital power, requiring rest and food to restore it.

In adults the rate for males is from 70 to 75 beats per minute, and for females 75 to 80. In infants the healthy pulse may be at birth 130 to 140 per minute, diminishing with increase of age. In the case of any child under five and over one year, if the pulse beats, say, 108 in the minute, it is too fast. The pulse of an adult may go down as low as 60 or even 50 per minute, but there is then something wrong.

Cooling the head is always safe with high pulse and feverishness, and often this alone will ward off disease and restore the healthy condition. If the pulse be low, fomentations to the feet should be applied, along with cooling action elsewhere, if necessary.

Purple Spots on Skin.—These arise first as small swellings. The swellings fall, and leave purple patches behind, which, if the trouble continues, become so numerous as to spoil the appearance of the skin. This especially occurs in children or young people, whose skin is exceptionally delicate. What has occured is really much the same as the result of a blow or pinch, leaving the skin "black and blue." Some of the delicate vessels in the skin have given way, and dark blood collects on the spot.

The treatment is to sponge all over the body and limbs with warm CAYENNE "TEA" (*see*), only strong enough to cause a slight smarting. It should never cause pain. If it does so, the tea is too strong, and should be diluted with warm water. The soapy LATHER (*see*) may also be used, and olive oil may with advantage be rubbed

on as well. Milk and boiling water should be given to the patient every two hours during the day, with a few drops of the cayenne "tea" in it. This is a true stimulant, and worth all the whiskey in the world. The object of the treatment is to nurse the patient's strength, and stimulate the skin. An intelligent study of many articles in this book will guide the thoughtful how to act.

Racks from Lifting.—*See* MUSCULAR PAINS; SPRAINS.

Rash, or Hives.—Infants are often troubled with large red, angry-looking spots, breaking out over the body, and causing trouble by their heat and itching. These are commonly known as hives. If the water in which a child is washed be hard, it will sometimes cause the skin to inflame and become "hivey." If the soap has much soda in it, it will also cause this. What is called glycerine soap, and much of what is sold as peculiarly desirable, is utterly unsuitable for an infant's skin. Soda soap will cause serious outbreaks even worse than "hives," and will often not be suspected at all, as a cause.

Only M'Clinton's soap, which is made from the ash of plants, should be used on tender skins.

When the "hives" are not very troublesome, they are apt to be neglected; but this should not be, as in most cases this is the time they may be easily cured. The true element in cure is found in attention to the *skin*, as distinct from the stomach or blood. M'Clinton's soap (*see* SOAP) applied as fine creamy lather will *cure* hives, and will never, we think, fail to do so. We know of a nurse plastering an infant's body with this soap, so that it was blistered. This is a totally wrong way of working. The right way is to work the soap and hot water as described in article LATHER, and to apply it gently with the brush to the parts affected. After applying it with gentle rubbing for some time, and leaving some on the sore places, the infant will usually be soothed to sleep. Where

over-cooling is feared, with a weak child, a little olive oil is gently rubbed on with the second coat of lather. In any case of itchiness the above treatment is almost certain to cure. Often the infant is suffering from too rich diet. (*See* Children's Food.) In such cases, thinner milk, and a little fluid magnesia administered internally will effect a cure.

Remedy, Finding a.—It will sometimes occur, in the case of those endeavouring to cure on our sytem of treatment, that on applying what is thought to be the correct remedy, the trouble becomes worse. For example, where there are violent pains in the legs, a bran poultice is put on the lower back, and it is rubbed with oil. The pains become worse instead of better, and perhaps our whole system is abandoned and condemed. Now, all that is required here is to think and try until we find the *true* remedy. If the pain in the legs is rheumatic, the hot poultice is all right. If it has been cramp, what is needed is a cold cloth on the lower back, instead of heat. In the example above given, what is needed is not to abandon the treatment, but to rectify the mistake, and apply cold instead of heat. In a great many forms of illness the same principle holds good. It is safer, where there is any doubt, to try heat first, but not in a very strong manner. If this gentle heating makes matters worse, gentle cooling may be tried. If the heat does good, it may be continued and increased, but never beyond the point of comfort. If the cold does good, it also may be continued on the same principle. What the patient feels relieving and comforting, is almost sure to be the cure for his trouble, if persisted in. *See* Changing Treatment.

Rest.—In every person there is a certain amount only of force which is available for living. Also this force, or *vitality*, is *produced* at only a certain definite rate. Where the rate is very low, only perfect quiet in bed for a time can bring down the expenditure far enough to enable the

vital force gradually to accumulate, and a cure to be effected. Sitting, in such cases, may be serious overwork.

When rest is ordered, we are often met by the reply that it is impossible, as work cannot be given up. It is, however, often possible to get a great deal more than is taken. Every spare moment should be spent lying down in the most restful position. It is an important element in nursing to give such a comfortable recumbent position to a patient as constitutes perfect rest, and the nurse who does so, does a great deal to cure.

There is with many a prejudice against rest. It is somehow believed that it is a weakening thing to lie still in bed. "You must get up and take exercise, and enjoy the fresh air." This is a very good order for a person who has the strength for bracing exercise and fresh air. But this is absent in a person truly ill. That person's vital force is low, and the organs that supply it are feeble in their action. The fresh air may enter the chest, but the lungs are not in a state to make good use of it. "Exercise and fresh air" only consume the sufferer. On the contrary, rest and fresh air allow the weak vital force to recruit. The sort of exercise which is wanted in such cases is given by others in massaging or such squeezing the muscles as stimulates the organic nerves without using vital force in the sufferer. We have repeatedly succeeded in giving new strength by some weeks in bed, when it could not have been given otherwise. It is all very well for a young, strong person, only a very little out of sorts, to take a cold sitz-bath for ten minutes, and then a walk of a mile or two in mountain or seashore air. But this treatment would be death to one really ill. Perfect rest in bed, with an abundant supply of air through windows open night and day, would save the life which such "exercise and air" would send out of the world. It requires only a little common sense to see this. "He must be weakened by lying in bed so long." There is

no such "must" in the nature of things. On the contrary, it may be absolutely necessary to his getting strength that he should lie still for weeks on end. You may, no doubt, give us instances in which a person was compelled to get up, and was thereby made to lose the delusion that he was not able to do so; but such instances in any number will not make one strong who is actually weak. Make sure first that vital energy is supplied, and when that supply rises to a certain degree it will not be easy to keep your patient in bed.

We would also note that true rest can never be had in a forced position. A limb bound down is not resting. The agonising desire to change its position shows this. True rest is found always in *freedom* and *ease*. It may be necessary to put splints on a limb, but it must never be done where rest is aimed at. Usually there is a position of comfort to be found. Let the patient find and keep that. He will then have rest.

For instance, an exhausted patient is lying at full length in bed, but under the waist there is a hollow which is bridged over by the back. This part of the back calls for a considerable amount of force to hold it over this hollow, but we get a pillow inserted under the back, the muscles relax, and the patient rests. In packing and fomenting an inflamed knee, for example, it is usually better done in a slightly *bent* position, which is more restful than a straight one. Employ two or three small pillows to prop it comfortably. And so on, in multitudes of cases, the earnest healer will be guided by the patient's own restful feelings. *See also* Noise; Veins.

Restlessness.—In slight cases, where the patient simply cannot sleep for tossing about in bed, a cold towel placed along the spine, with a dry one above, will usually relieve, especially if changed and cooled several times as it grows warm. If heat be specially in the head, then that may be cooled in the same manner till peace settles down in the brain.

But we must go on to consider those cases of restlessness in which there is no extra heat in either spine or brain. Tea may have been taken in a rather strong infusion, or so late that its peculiar influence may be the cause of the restlessness. It is necessary to avoid this beverage if such restlessness is to be escaped; still it will generally be found that in cases in which tea has caused serious wakefulness and restless tossing, that there is more than the mere effect of the herb, and that superabundant heat is present also; then the application already pointed out will give relief.

Now take an instance in which it seems to be the mind that causes the tossing rather than the body. Preachers after earnest preaching are in many cases sleepless and restless too; so are almost all persons when currents of exciting thoughts have been set agoing in their minds. Then, no doubt, it is necessary to get at relief from the spiritual side, by means of thought fitted to calm down the excitement that has been raised. But it is never well to forget that in all such cases there is a material as well as a spiritual aspect of the experience. Many preachers take a sitz-bath before going to bed after a day of service, and find that somehow when sitting in the cool water the overdriven brain begins to slacken pace. If from any cause you are restless and cannot lie still, even after the head and spine have been cooled as we have described, it is well to take a sitz-bath in cold water for a few minutes. Dry and wrap up well, and you will be quiet after. Certain forms of coughing apparently cause the most serious restlessness. A warm poultice should be placed between the shoulders, and cold cloths pressed gently on the breast.

If there is extreme shrinking from everything in the least degree cold, then you need to go a step back in your treatment. A sponging of the most gentle kind, with CAYENNE LOTION (*see*) and water, all over the body, given very carefully for three or four days, once a day, will put away the shrinking to which we refer. This should be

done with tepid water at first, but as the skin freshens it will be found comfortable to do it with cool water. In tender cases the poultice or hot bag will need to be comfortably warm, and not hot. The cool cloth must not be wintry cold, nor even at first summer cold. It is, however, necessary to get at the hot and irritating surfaces that are causing the cough, with more or less that is cooling. We may do this ever so gradually, but we must do it, if we would succeed in giving rest from the cough. In a strong person's case there is really no difficulty. It is an easy matter to put on cloth after cloth till the irritated part is reached and cooled. But when the patient is spent to all but a skeleton, and has restlessness from frequent coughing, it is a very different matter. Still to the very last the irritating heat may be kept down, and long sleeps given, when otherwise it would be hard work indeed to get through the last stages of illness. We write thus because we know it is possible to give precious relief even when it is out of the question to save life. It is possible to make even the last night on earth comparatively a peaceful one, instead of its being so very restless as it often is. This is to be done just by cooling the parts that irritate, and these only. Generally, heat may be required rather than cold, but at the part which is irritating and keeping up the coughing, there must be cooling. The kind and capable nurse who can carry out this cooling is beyond all price. Those only can understand this who have been delivered from an all but incessant cough by means that produce no reaction. It is also well to remember that we now and again give life by means of rest when we had no idea of giving more than temporary comfort. We have repeatedly had cases in which there seemed no hope of doing anything further than giving relief, but that relief has turned out to be the commencement of cure.

Rheumatic Fever.—*See* Fever, Rheumatic.

Rheumatism.—We feel urged, in first considering this sore and very common trouble, to quote the old adage that "prevention is better than cure." Many people laugh at wettings, and some foolish young ones even seek exposure. We would impress upon all such that the effects of exposure may be, and often are, cumulative: that is, you may escape any direct effect for years, and then find your recklessness end in rheumatism for the rest of your life. Let care, then, be taken to avoid wettings, unless these lie in the way of duty. Change clothes as speedily as possible when they are wet, and encourage the skin to all healthy action by proper care and exercise. Even with the skin all right, a wise man will not act in a foolhardy way, but if he must get wet and chilled, he will probably not suffer very much.

We would strongly recommend the use of Kneipp linen underclothing (*see* UNDERWEAR). It powerfully stimulates the skin, and, by conducting away the perspiration, prevents chills. We have known many who suffered severely from rheumatism being quite cured by the use of this material. It is as comfortable as it is hygienic.

But supposing the rheumatism does come on, it may be treated, in mild cases, by gradual and steady moist heating. For the method of applying this, *see* FOMENTATION and ARMCHAIR FOMENTATION. If the case is comparatively a fresh one, there will be need for no more than this fomenting, repeated several times at intervals of two to four hours.

Where the nervous system has been seriously affected, the fomentation must be gradual, and the moist heat gently insinuated into the parts affected. Where narcotics have been used, these *must* be given up if a cure is to be hoped for.

In certain chronic cases, which are very largely nervous in their origin, a powerful soothing influence is required.

This is secured by the use of soap lather (*see* LATHER; SOAP). Cover the back and head, piece by piece, with this, rubbing it on and off four or five times. Cover the fifth application with a soft cloth, and leave it on for the day in the morning, and for the night in the evening, the patient being in bed. Hot olive oil or occasionally cold drawn oil of mustard is gently rubbed on the stiff parts; when this cloth is removed, gently knead or squeeze the oil into the muscles. If during the lathering the patient feels too cold, a little olive oil should be mixed with the lather. A change to a dry climate from a damp one sometimes does a patient good, but when that is not possible, great relief, and in many cases cure, is to be had by this treatment.

Ringworm.—This distressing and most infectious trouble is due to a small parasite. Where that settles in the skin, a reddish *ring* soon appears, and gradually widens, leaving a leprous white patch of skin within it. Care should be taken at once to cure this, as, if it spreads widely, serious results follow. Fortunately it is slow in growth, and can easily be checked and cured. The method of cure is to soak the rings well with vinegar or weak acetic acid. Of strong acid use three tablespoonfuls to a quart of water. By even the first good soaking with this, the developed parasites are killed, but the eggs are not. These hatch out by degrees, so that renewed soaking and "dabbing" with the acid and a soft cloth are required. Each application may be continued for fifteen minutes. If the hair, as on the head, interferes, it may be cut closely, but need not be shaved. In a bad case the daily soaking with acid may not be sufficient. Then a poultice of potatoes and buttermilk (*see* BUTTERMILK POULTICE) may be applied first, and afterwards the weak acid. Secure that there be felt, before the close of each application, a *slight smarting*, to show that the acid has really soaked in. It is not difficult to guard against its

spreading in a family or school. All that need be done is, once a week or so, to see that the whole skin of those exposed to infection, head included, is freshened by a wash all over with vinegar, and then protected with a gentle rub of olive oil. If this is done we should have little fear of contagion. Such a weekly freshening would ward off other evils as well as this one.

Rose.—*See* ERYSIPELAS.

Rupture.—The abdomen is formed of a series of *rings* containing the bowels, and holding them in proper position. If the muscles and tissues holding these rings *yield* so as to permit them to separate a little, what is called "rupture" takes place. It may be caused by violent muscular efforts, heavy weight lifting, jumping from a height, etc., etc. The rings are not broken, but only displaced, and especially with young persons, the "rupture" can soon be brought all right, but even with the aged, in all cases it may be mitigated, if not cured, by proper treatment.

The first thing is to replace any part of the bowels which may have escaped through the opening of the rings. Lay the patient flat on his back. He must not be treated in any other attitude. Then rub the swelling gently *downwards*. It *must not* be rubbed upwards, or it will be made worse. This rubbing will soon bring the bowel into its proper place. Give some time and kindly care to this treatment, which is very important. Then get a surgical instrument maker to fit a proper truss. See that this really fits. If it hurts in any way when first put on, it does not fit well enough. Avoid for a considerable time any effort likely to strain the part. Take light and easily digested food; give up all alcoholic drinks and the use of tobacco.

Saliva.—*See* DIGESTION; NOURISHMENT.

Saltrome.—The disease known by this name in Canada breaks out in the hands, especially on the palms. The skin cracks open and refuses to heal up. Sometimes,

if the hands do heal, the trouble comes out on other parts. It is probably due to the long-continued use of bad and strongly irritating soap in washing the hands and face, conjoined, in Canada, with the great dryness of the air.

The treatment for prevention is the regular use of M'Clinton's soap (*see* SOAP). Where the trouble has developed, the hands and face, if involved, should be packed in cloths soaked in buttermilk. Then over the packing we should foment with large hot flannel cloths (*see* FOMENTATION). Renew, if necessary, the buttermilk packing, and after a thorough fomenting, leave the buttermilk cloths on all night, with dry ones on top. Then gently anoint with OLIVE OIL (*see*). This treatment, with some rest and the use of the above-mentioned soap, should soon effect a cure.

Santolina.—This plant is the *Chama Cyparissos*, or ground cypress. It is of the greatest value as a remedy for worms in the bowels (not tapeworm), and also acts as a stomach tonic of no small value. It is cut at the end of the season, made up in small bunches of six stalks or so, and hung up to dry. When required for worms, boil one of these bunches in three teacupfuls of water until it is reduced to two teacupfuls. Half-a-teacupful of this is given to a *child* with worms, each morning before any food, for four days. In the evening of the fourth day an ordinary dose of liquorice powder is given to move the bowels. For a *grown-up person* the quantity is a full teacupful each morning. If a child picks at his nostrils, or grinds his teeth while sleeping, the santolina will cure him, even if no other symptom of worms is noticed. It may with advantage be used in all cases where there is indication of the failure of the mucous membrane of the stomach and bowels.

Where required as a stomach tonic, santolina should be infused with boiling water, as tea is. About half-an-ounce of the dried herb is infused, and a small teacupful

taken as hot as can easily be drunk about an hour after each meal. Half the quantity will do for young people under fourteen. Do this six days in succession. Then take none for six days. Then again take it for three days. This treatment may be repeated after a week.

Sciatica.—This is a severe pain in the lower back, shooting sharply down the back and calf of the leg. It arises from inflammation of the large nerve which supplies these parts of the leg with power. Most commonly it is caused by exposure of the hips or lower back to cold and damp, as by sitting on the grass or a stone seat.

The cure for it, in the earlier stages, is the application of the ARMCHAIR FOMENTATION (*see*). This may be applied for an hour, and renewed immediately for another hour if the patient can stand it, and then rest given for two hours, and the fomentation applied for two hours again, or at least for one, taking care to rub with oil and wrap up in comfortable flannels between and after the treatment. This may be done again on the second day. The fomentation may then be given once a day until the pain is removed.

Be quite sure that no trifling application will succeed with such a disease as this. It will not do to use less heat than will go through and through the haunches of the patient; and that amount of heat is not very small. You must have a good soft blanket if possible, your water must be boiling hot, and you must have plenty of it.

If the hot treatment causes increase of pain, this indicates that a stage has arrived in which *cold* is to be applied instead of heat to the lower back, to subdue nerve irritation. Before or after this stage, cold application will do harm, so it is well always to try heat first, as in the great majority of cases that is what is required. When cold is applied, the patient *must be warm*, and if necessary the feet and legs should be fomented.

To keep what is got either by the soothing influence of cold or by the stimulating power of heat, it is good to

rub with hot olive oil, and to dry this off well in finishing, and also to wear a good broad band of new flannel round the lower part of the body. This band ought not to be so tight as to confine the perspiration. *See* CHANGING TREATMENT; REMEDY, FINDING A.

Scrofula.—The treatment under GLANDS, SWOLLEN, should be followed. But besides, the whole membranous system of the glands must be stimulated. Daily rubbing briskly over the whole body with the cold-drawn oil of mustard for a quarter-of-an-hour will have this effect, and even by itself may cure.

Good, easily digested food must be taken (*see* ABSCESS; ASSIMILATION; DIET; NOURISHMENT), and overwork avoided. Continued work, as with a child at school, may quite prevent a cure, while if the work ceases, the cure will be rapid. It is better to have health and holidays than sickness and school. Where there is a family tendency to scrofula, care should be taken to treat promptly any case of glandular swelling.

Scurvy.—Is a disease springing from disordered digestion, and caused sometimes by partial starvation, but more frequently by a deficiency of vegetable acid in the food. It often manifests itself in skin eruptions, the skin peeling off in scales. To ward off or cure this disease, fresh food should always be used, and salted or tinned foods avoided. Especially should abundance of green vegetables and fruit be used, and where such cannot be obtained in sufficient quantity, lemon juice is valuable. Too much exposure, fatigue, and impure air, aided by a wrong diet, are the causes that formerly made scurvy so prevalent in the navy. It has almost disappeared since a regular allowance of vegetable acid has been served out.

Seamill Sanatorium and Hydropathic.—Very soon after the appearance of these "Papers on Health," the need was felt for some establishment where the treatment expounded here could be given by trained attendants

under Dr. Kirk's personal supervision. The site was fixed on the Ayrshire coast, in the parish of West Kilbride. This region was chosen because special advantages of soil, climate, and scenery recommended it. The soil along the shore is almost pure sand, and dries rapidly after rain. The climate is extremely mild, high hills sheltering the whole region from north and east winds, and the Arran mountains, intervening some sixteen miles over the sea to the west, collect much of the rain. Hence, although near some very rainy districts, the Seamill neighbourhood is peculiarly sunny and dry. In winter the sun reflected from the water, and beating on the face of the hills, makes the shore climate most genial, and when other places only a few miles away are encased in ice, flowers will be blooming in the gardens at Seamill. In the very best part of this district a villa was secured in 1880 by some gentlemen interested in the treatment, with grounds abutting on the sand of the seashore.

Here treatment was carried on with great success, until it became evident that larger premises were needed. In 1882 Mr. James Newbigging was secured by Dr. Kirk as manager and head-bathman, and worked under Dr. Kirk until the latter's death in 1886.

Mr. Newbigging then bought the establishment. Since that time, it has constantly increased in size and efficiency until it now accommodates close on a hundred patients.

Very many have come to Seamill almost or quite hopeless, and have left it with health restored and vigour renewed.

It ought to be mentioned here that in all his dealings with this establishment Dr. Kirk never had any pecuniary interest in it, always giving his services free. Nor has the writer, or any of Dr. Kirk's family, any pecuniary connection with the place. All information as to the establishment may be had by writing to the Proprietor or Manager, Seamill Sanatorium, West Kilbride, Scotland.

Sea-Sickness.—The cause of this is a nervous derangement of the internal organs, by which the bile passes into the stomach instead of, as it normally does, passing down into the intestines. A tight bandage round the middle of the body, so as to oppose resistance to this, will help *so far*. When the sickness has come on, a teacupful of hot water, at intervals, will very largely mitigate, and will often cure it. Even half a teacupful or a tablespoonful will prove sufficient in many cases where the teacupful cannot be taken. If this small quantity of hot water be taken every ten minutes, the worst effects of sea-sickness will not be felt, and far more relief obtained than most people will believe until they have tried it.

Sensitiveness.—When the nervous system is in a certain state, all impressions on it are exaggerated, and the patient suffers from light sounds, and various irritations, far more than is usual or healthy. This state makes treatment difficult, because either cold towel or hot flannel distresses the sufferer, and by this does more harm than good. Narcotics only do harm, without any good, and leave the patient worse.

The nervous system may in such cases be soothed by soaping the back with soap lather (*see* LATHER ; SOAP). The lather is to be blood heat, and very soft and creamy. Spread it all over a soft cloth as large as the back (having first warmed the cloth), and then place it gently on the back, lather side next the skin. Let this be done at bedtime. Fasten the cloth on the back with a bodice that will fasten closely, and let the patient sleep on it. Wash off in the morning with warm vinegar and water half-and-half. Rub with oil and dry off. Let the patient take twice a-day, for eight days, a teaspoonful of well-boiled liquorice and a tablespoonful of hot water. This treatment will usually abate the sensitiveness in a week or so, and bring the patient within reach of other remedies. For example, it will, after a week or so, even in very trying cases, be possible to foment the feet and legs once a

day, and rub them with warm olive oil. It will even be possible and well to foment with a hot blanket across the haunches, and in this way to bring on comparatively strong health. Change of air and scene will then be desirable: it is highly refreshing to one who is in the way of recovering, though only harassing to one who is feeling despondent and increasingly ill. We generally, when asked if a "change" would not be good in such cases, reply, "Yes, if once you have got health enough to enjoy it." When that has been fairly secured, stronger measures may be used with advantage. We feel much sympathy with those who suffer from sensitiveness, as so many do, and earnestly pray that these remarks may be blessed to such sufferers.

Shampooing.—*See* HEAD, SOAPING.

Shingles.—Though not often fatal, this illness gives serious trouble. Its outstanding feature is a rash which comes out as a more or less regular belt round the body, or over one shoulder. The rash forms, if allowed to go on, into blackish scabs, and is accompanied in some instances by severe pains shooting through the body. It arises from a failure of the digestive system, therefore the stomach must be as little taxed as possible. Let hot water be sipped in teaspoonfuls for half-an-hour at a time, several times a day. For external treatment, wring a small sheet out of cold water and vinegar, and pack the whole trunk of the patient in this for half-an-hour. Do not use olive oil. The vinegar packing may be renewed in an hour, and as often as the patient feels it agreeable. The mixture of vinegar and water must be weak enough not to be painful on the skin. If the pains in the body persist, then cold cloths may be applied, not very large at first, to the spine, while the patient is warm in bed. Should the feet be cold, this cooling of the spine must not be done until they are wrapped in a hot fomentation up to the knees. If the scabby eruption is very obstinate,

the SOAPY BLANKET (*see*) applied daily for two or three days should clear it away. Wheaten porridge, gruel, and milk diet is best. A drink may be made of hot water and lemon juice, with five or six drops of tincture of cayenne added to a tumblerful, and sweetened to taste. *See* DRINKS.

Shivering.—This is often a trivial matter, but sometimes it is a symptom of a serious chill. It may be only the effect of a thought, or of some mental shock, but in any case it is a nervous disturbance, and failure of energy, causing us to lose control of the nerves which produce the shivering movements.

For ordinary shivering, the result of cold, treat as in COLD, TAKING. For cases where the vital action has evidently become very low, foment the patient as directed in ANGINA PECTORIS.

If pain in some part, as in a nursing breast or tender lung, indicates inflammatory action there, cold towels may be applied to that part while this fomentation is on. Renew the cold cloth as often as the patient feels it agreeable, keeping up the heat of the fomentation all the time. Increase the size of the cold cloth if the patient finds this pleasant ; stop if it becomes unpleasant. Many serious troubles are checked in the first stage by treatment on these simple lines.

Sick Headache.—*See* HEADACHE.

Sitting (or Sitz) Bath.—This bath, in whatever form administered, is essentially a sitting in cold water with the feet out. The feet, in fact, are better to be warmly covered up while the patient sits in the bath. The most important thing to be considered in all such baths is the degree of vitality possessed by the patient. If he has much vitality, then the bath may be deep and longer continued—as long as even forty minutes. If the vitality be low, the bath must be brief and very shallow —it may be even necessary to make it as short as *one*

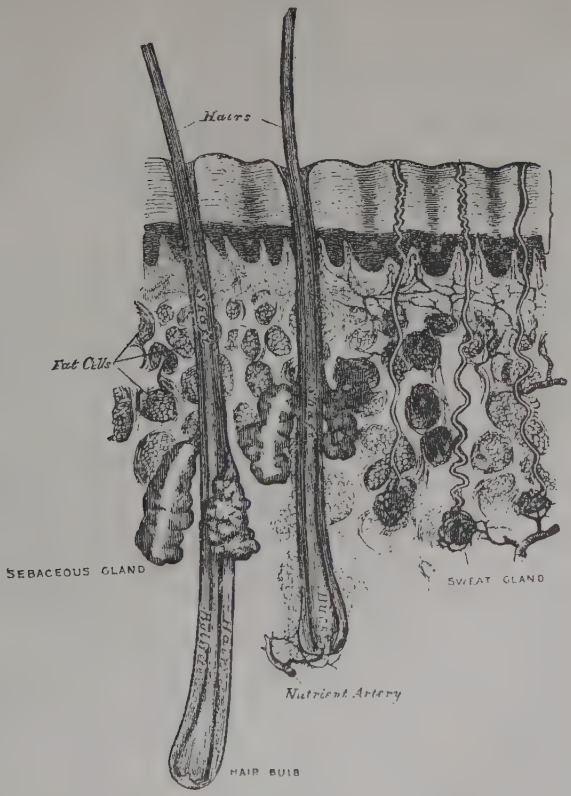
minute, or even less. In some cases, as a beginning, a mere dip is all that is required. This leaves a large discretion to the nurse, and is a matter which common sense should be able to decide. To try a short bath first, and repeat it several times, rather than to give one long one, is the safest plan. It will soon be found out how much the patient can bear. If the vitality be so low as to make the simple sitz-bath a danger, the feet may be immersed, for the one or two minutes of the bath, in a small bath of hot water, and the patient well wrapped up all over in warm blankets.

In some cases it is necessary to *pour* cold water on relaxed organs, which, especially with females, will sometimes not be braced up by mere immersion. But such pouring must be done with caution. Half-a-minute of it is *a long time;* one quarter-of-a-minute or less will usually be enough, even in important cases. If longer applications have only done harm, then let our friends try the one-minute bath, or the quarter-minute stream of water. In many cases we have known this make all right. Such short baths may be taken twice or thrice a day.

Skin, Care of.—Among the vast majority of people air and water far too seldom touch the skin. Want of water makes it unclean, and want of water and air make it slow in reaction. Now, a healthy skin is of the utmost value when one is attacked by disease. It can regulate the temperature of the various organs, and the application of heat or cold to it will cause a reaction at once. Much of our treatment as given in this book is directed towards stimulating the action of the skin. It is obvious that in health as in disease the skin can and does so act on the internal organs.

It should be the aim of everyone that this most important part of the body should receive careful attention by a strict watch on the diet, by cleanliness, tonic water

baths (cold, tepid, shower, as may be found to suit), and by tonic air baths. Light clothing and porous underwear will also be found of use. We have already drawn



Section of the Skin, showing glandular structure.

attention to the value of Kneipp linen as the most suitable form of underwear (*see*).

Skin, A Wintry.—Something like an epidemic of skin trouble is often experienced in cold, wintry weather. First, the skin becomes dry and hard. A moist and

sticky exudation replaces the ordinary sweat, and great irritation is felt when the skin is exposed to the air. If the sticky exudation be completely rubbed off, this irritation ceases. In this, and in the absence of inflammation, "wintry skin" differs entirely from eczema. The remedy is to rub all over every night for three or four nights with the CAYENNE LOTION (*see*). If this does not effectually cure, lather all over with soap and olive oil (*see* LATHER; SOAP), before rubbing with the cayenne lotion. If the treatment of the whole skin at once is felt to be too severe, it may be cured by taking it in parts.

Skin, Creeping.—A sensation sometimes very much annoys patients, which they describe as like thousands of small creatures creeping over the skin. It most commonly arises from defective working of the pores. A kindred trouble may be noticed along with this creeping. It is as if a stream of cold water were passing down the back. That causes great discomfort in many cases.

The cure is sponging frequently with weak ACETIC ACID (*see*) or even good buttermilk. The skin being in such cases very sensitive, it is well to treat it bit by bit, a small part at a time. Take one limb, then another, then part of the back, and then another part. Besides this sponging with acid, and before it is done, the skin should be gently covered with lather (*see* LATHER; SOAP). If this treatment is not successful, a little olive oil, with cayenne lotion, may be mixed with the soapy lather, and will make its effect more powerful. This creepy feeling is sometimes the result of cold, and some extra clothing may remove it. *See* UNDERWEAR.

Sleep.—No greater mistake could be made than to curtail the hours of sleep. Eight hours should be taken as a minimum, and any weak person should take ten hours. More and better work can be done by a person who takes fully eight hours' sleep than by one who tries to do with less.

Sometimes strong tea or coffee is taken to drive away sleep, and so the nervous system is injured and sleep will not come when it is desired. Tea or coffee should never be taken except *very* weak, and the person who accustoms himself to this will very soon come greatly to prefer it.

Sleeplessness.—In search of sleep men do many things both dangerous and foolish—sometimes even fatal. Sleeplessness arises in so many ways and from so many causes, that it is often hard for the patient to find a cure, and he will try anything in desperation. A little thought should prevent this state of mind. For instance, we have a man who tries to get sleep by fatiguing himself by long walks in the open air or hard physical work of some kind, but he only grows worse. Now, a little thought will show that sleep requires a certain amount of brain energy. If the supply be below this amount, the brain is *too tired* to sleep. Violent exercise of any kind will only make matters worse. So "keeping people awake" all day is tried, to make them sleep at night. It fails from the same reason—that it *reduces* brain power. All narcotics in the end fail similarly. There comes a time when they have so reduced brain power, that even an enormous dose fails to give sleep, and the patient comes dangerously near poisoning himself—sometimes, indeed, does so outright. In all these cases, that which has worn down the brain *must be given up* as a first condition of cure. Whether brain work, over-excitement and dissipation, alcohol or tobacco, the cause must be removed, and rest taken in the open air, or in well ventilated rooms.

This done, we come to treatment. Soaping the head (*see* HEAD, SOAPING), or even the application of towels wrung out of cold water, will often, when the cause has been removed, do all that is needed to give sleep. These remedies, especially the first, should be at once applied, if the sleeplessness is accompanied, as is usual, with *heat in the head*. Even where the fevered head is connected with indigestion, the stomach will be powerfully helped

by a good soaping of the head at bedtime. If, on the contrary, the head is cold, then warm fomentations to it will be the proper treatment. Perhaps the very best guide will be to aim at what will make both head and feet perfectly comfortable, and *both* of natural heat. If cold, the feet must be bathed or fomented, and the legs also up to the knees. Sometimes the pouring of warm water in a *douche* over the head will act perfectly, instead of the fomentation; but pouring *cold* water must be avoided, or only very cautiously resorted to (*see* SITZ-BATH and RESTLESSNESS).

Sometimes sleeplessness proceeds from the use of bad drinking water, through its effect on the stomach and bowels. In this case, of course, the first thing is to see that no bad water is drunk. People cannot be too careful about a water supply. Usually boiling for half-an-hour renders water safe enough, but this is not always the case. Care must then be taken to see that water from any corrupted source is not used. When it is given up, treatment as above may be applied.

If the sleeplessness be caused by a nasty tickling cough, put a BRAN POULTICE (*see*), or similar FOMENTATION (*see*) on the back *behind* where the cough catches. Then change cold towels *in front* over the same place. Soap the head, and sleep will probably soon come.

Where palpitation of the heart causes sleeplessness, change cold towels over the heart, fomenting the feet if necessary, and the palpitation will usually soon yield. *See* BRAIN; CHILDREN'S SLEEP; EXERCISE; HEAD; REST.

Smallpox.—If an epidemic prevails in the neighbourhood, or a case occurs in the house, after *due and carefully performed* vaccination of the family, the important matter to regard is *cleanliness*. Frequent and thorough washing and changing of all the clothes worn next the skin will do much to prevent possible infection. If the clothes are often changed, then, and well washed,

and the skin gets a daily washing with soap and is sponged with hot vinegar, there is little danger of infection during an epidemic of smallpox, or even when nursing the disease. Acetic acid, or white wine vinegar, is even a more powerful cleansing agent than carbolic acid, and has the advantage of being non-poisonous.

It is important in treatment to attack the disease early. We have known an attack completely defeated, and the patient cured, by a wet-sheet pack administered at the right time. The early symptoms are a great weariness and chilliness. In this *cold* stage, half-a-teaspoonful of cream of tartar, in two tablespoonfuls of hot water, should be given every half-hour. Also (and this is important) wrap the feet and legs up over the knees in a large hot FOMENTATION (*see*). The head also may be packed in hot cloths. If the fever does not rise, the applications may continue. If the fever does come on, *cold* cloths must be persistently changed on the head. This we have known *reduce* the bodily temperature two degrees in half-an-hour, when if left alone it would probably have *risen* two degrees. The whole body may be packed in a damp sheet, covered with dry blanket, and this continued cooling of the head still proceeded with.

When the eruption has appeared, and the violent itching set in, the eruption must be persistently *soaked* with weak ACETIC ACID (*see*), or good white wine vinegar and water. In this soaking, avoid giving the patient pain by too strong acid. The necessary healing power will be found in such a mixture as will only cause the eruption slightly to smart.

It is not necessary to treat a patient all over at once. You will do better if you take one or two pimples at a time. You can then pass from part to part slowly, getting over the whole. You can use a little olive oil after this soaking with vinegar, and so keep off all danger of chill such as might occur if too much of the surface were treated at once.

If these simple means are well applied from the first, it must be a very bad case indeed which will not be cured, and most likely without any marks being left on the skin.

Snake Bites.—A snake bite is only one of a large class of injuries which may be considered under one title. From an insect sting upwards to the most fatal snake bite, we need to note, first, the *blow* or *shock* of the bite, and then the fever symptoms which show poison spreading in the system. The blow or shock paralyses or kills a larger or smaller part of the nervous system. The nerve of the heart may be almost instantly so paralysed, with fatal effect. The snake poison especially affects the organic nervous system, and thus attacks the very source of vitality. In smaller stings, rubbing vinegar or weak ACETIC ACID (*see*) into the wound is sufficient almost instantly to cure. The same substance will cure greater evils. In the case of snake bite, first suck the wound thoroughly, watching that the lips and gums of the person who sucks are free from wound or scratch, or use what is called "dry cupping." Much may be done thus in a *few seconds*. But it must not be continued longer, and hinder the next step. This is to inject weak acetic acid *into the bite*. Where snakes are abundant, a small syringe, such as is used to inject morphia, with a rather blunt point, should be always carried, and acetic acid of the right strength. The injection must be *thorough*, and of course pain must be borne to avoid greater evil. Foment cautiously but persistently over the stomach and along the spine. Pay special attention to the lower back if bitten in the foot or leg, and to the upper part if in the hand or arm. During recovery, give careful diet, and rest. Of course this treatment will fail in some cases, as any treatment may. But if immediately applied, it will save a very large number of lives.

Soaping the Head.—*See* HEAD, SOAPING.

Soap, M'Clinton's.—Those of our readers who have followed out in practice the suggestions which we have given in these papers, will have seen some reason to believe in the importance of soap. Probably some of them have laughed at patients whose chief need evidently was a good washing of the skin! But there is more in soap applications than mere cleansing. These are found to be of immense value in cases in which there has been no want of perfect cleanliness—in cases even in which the skin has been habitually clean. For instance, in patients with nerves so sensitive that almost no application of any kind can be used, a covering of the back with a fine lather, and over this a soft cloth, has soothed the system so effectively that a great step has been secured by this alone in the direction of cure.

When in search of really good soap we soon find that certain soaps are very harmful. Soaps made from "soda ash," as nearly all hard soaps are, tend to dry and harden the skin, and if used often produce bad effects.

Soda soap does well enough for many purposes, and if it is not used often, and the skin is strong, no great harm may be done; but when it has to be used frequently, or is applied to a tender sensitive skin or to parts from which the outer skin has been removed, it will not do at all.

For years we had been seeking for somebody who could make us hard soap without any mixture of soda. Once, when in Belfast, we spoke of this to a friend. He took us to a soapmaker, to whom we mentioned our desire. This gentleman at once saw what we wanted, and told us frankly that he could not make the soap that would suit us, and that he knew only one firm in the trade who could do so. But he assured us that that firm made a pure hard soap which we should find exactly suitable to our purpose. Thus we were introduced to the manufacturers of M'Clinton's soap. This firm, we found, made the very soap we had been so long in search of.

It is made (by a process which is, we believe, a secret in possession of this firm alone) from the ash of plants, and so it may truly be said that it is Nature's soap.

There is something in the composition of this soap which makes it astonishingly curative and most agreeable on the skin. Lather made from it, instead of drying and so far burning the skin of those using it, has the most soothing and delightful effect.

As yet we do not feel able to explain this, not being sufficiently chemical for the work, but we have tried the matter, and feel assured that this soap is by a long way the best for cleansing and curative purposes. Even soap which possesses the same chemical composition lacks the properties of that made from plants, a fact not without parallel, as chemists know. The substances of the plant ash differ in some unknown way from even those chemically the same, which have been artificially produced.

We trust that our noticing the thing in this way will have the effect of calling attention to the whole question of soap-making and using. It is one of those questions on which great ignorance prevails. Many people judge toilet soaps by the perfume and price. If the former is pleasant, and the latter high, they consider they must be getting something specially suitable, and yet the soap itself may be very injurious. Before we had some cases of bad diseases of the skin arising from the use of certain soaps, it did not occur to us to think much of the difference between one sort and another. Hence we just said, "use lather from good soap." Now we see need for care as to the kind of soap used, and especially to warn against all soaps, however fine-looking, that burn the tender skin when lather made from them is much applied.

Very especially is it important to distinguish between the qualities of soaps used on the sensitive skins of infants and invalids. If you ever wash an infant in strongly caustic soap, you may look for a state of discomfort in

the child which will make it restless and miserable without your being able to tell how it is so. You may ascribe to unhappy "temper" what is due to the bad soap which you have put on the skin. So with sensitive invalids, when they have to be washed or soaped, so as to keep off or heal the bedsores which are apt to appear on them, it is easy to see how much difference there must be between the effect of a caustic soap and one really and delightfully soothing.

M'Clinton's soap is the very best and most lasting of the soaps we know for washing purposes, so that in recommending it we are not promoting the use of a merely medical thing, but of one for ordinary purposes of a genuine and excellent character. Every grocer ought to have it in stock, and if it is sought after with some vigour it will be soon brought in general trade within reach of all. It is not one of those things that flame on railway stations and on the covers of magazines. The makers are most quiet, unpretending men, and one would think almost afraid to take their light from under a bushel. But they are in possession of a most valuable secret in knowing how to make this soap.

Several soap-makers claim to be makers of this soap, insisting that theirs is as good as M'Clinton's. It is far cheaper. Well, we put it to the test of use. It is not the same thing at all. It won't do, nor will it nearly do: the soda is there beyond all doubt. We are compelled to recommend our readers to make sure that they get M'Clinton's soap, with this name stamped upon it.

There is a strong temptation to deception, because M'Clinton's soap requires eight days at least to make, while the fiery stuff is made in one day, or two at most. It is of great importance that the true soap should be secured. The matter is so important that precious life and health depend on so humble a thing as this.

Take care you are not cheated by a wrong substance. Do not say you have tried our remedy and found it fail.

If you have applied irritating soap instead of soothing, the so-called remedy could not but fail. Make sure you have the right substance, and you will have the right effect.*

Fortunately the makers of M'Clinton's soap are sternly honest men, and their soap can be relied on : that we have found out, we think, beyond mistake. We are happy to be able to say that they have not sent us even a bar of soap for our "Papers" on their behalf, but only assured us that they will "reward" our kindness by "making a genuine article." If there is "puffing," there is at least to be no payment for it, and that is a safe way of keeping the "puffer" to the truth !

The curative effects of M'Clinton's soap will be found dealt with in the directions for treatment of various troubles throughout this volume. See the articles on ABSCESS ; ASTHMA ; BLOOD, PURIFYING ; BOILS ; CANCER ; CHILD-BEARING ; DWINING ; FEVER ; HANDS ; HIVES ; PIMPLES ON FACE ; RHEUMATISM ; SKIN ; SLEEPLESSNESS ; SOAPY BLANKET ; STOMACH TROUBLE ; VACCINATION TROUBLE.

Soapy Blanket, The.—It seems necessary, in getting people to use the best means for the recovery of health, carefully to consider, not the diseases to which they are subject only, but especially the processes of cure. We require to go into the very nature of things, so to speak, and to make it all palpable to the inquirer. For example, you prescribe a little olive oil on the skin, and the nurse is horrified at its being suggested that she should "block up the pores." Her idea is that these pores are only little holes in the skin, so that, if you fill them up with oil, the insensible perspiration will not get through.

* To prevent an inferior article being substituted if it is asked for as barilla soap simply, it is in this edition called M'Clinton's soap. It is now made solely by D. Brown & Son, Ltd., Donaghmore, Tyrone, Ireland, who have purchased the business and trade secrets of the old firm, and manufacture the soap in the same way. If not stocked by the local chemist or grocer, small samples can be had from the manufacturers free on receipt of 2d. to cover postage, or a large assorted box will be sent on receipt of 2s.6d.

Now let us observe that a pore is a complete organ in itself, and has at least three things that characterise it. (*See* page 285). First of all, it is a living thing. It is so as really as a finger is a living organ, or an eye, or an ear. When it dies, it is as much an opening as ever, but it ceases to secrete the perspiration which is constantly separated from the current of the blood when it was healthily alive. When it is sickly, though still living in a weak degree, it secretes, but so sluggishly that the substance which it separates from the blood does not pass off easily—it gets, so to speak, thick and sticky, and remains in the pores.

In the second place, the substance which a pore secretes will not combine with certain things, and it will chemically combine readily with other things. When the pore is sickly, it may be aided, first, by the introduction of heat, which becomes vital action, and secondly, by the use of such substances as will readily combine with its secretion. The heat makes it secrete more perfectly, and the chemical combination makes the removal of the secretion easy. It is possible to block the pores up, but it is not very easy to do so. A healthy pore will send its secretions out through very close stuff. It is only by something like very strong varnish that it can be prevented.

There is wonderfully little danger in ordinary life of any such "block" as this. But there is very great danger of the pore being deprived of its secretive power, and of its power to open its mouth when that is so much wanted. Warm olive oil sets millions of pores to full work sometimes in a few seconds.

Now let us look at the application of the soapy blanket in the light of these remarks. Here is a poor patient, sitting in an armchair by the fireside, labouring to get breath. It makes one feel burdened to see him. What is wrong? Are the pores blocked up? No; but they are more than half dead, and what they do secrete

is not such an ethereal thing as it should be. Nearly all the work of getting rid of the waste of the body has been thrown for months upon the poor lungs. The kidneys, too, have got far more than their share, just because the pores are sickly.

The remedy is the soapy blanket. This most valuable means of stimulating the healthy action of the skin (as prescribed in many articles in this volume) is prepared and applied as follows:—Have a good blanket, and plenty of M'Clinton's soap (*see* LATHER and SOAP). Shear down a tablet or two into boiling water—as much water as the blanket will absorb. The blanket may be prepared as directed in article FOMENTATION, using these boiling *suds* instead of water. Have the patient's bed ready, and spread on it a double dry sheet. Soak in the suds a piece of thick flannel large enough to go round the body under the armpits. Wring this out and put it on the patient. Wrap the blanket tightly round the patient from the neck downwards. Tie something round the waist to confine it close to the body. Put the patient into bed, and wrap the feet well up in the blanket. If it is not sufficient to cover them, an extra piece of soapy flannel must be used. Then wrap the sheets over the patient above the moist blanket, and cover all nicely up. In removing the blanket, which may remain on half-an-hour, it is well to proceed gradually, uncovering the body bit by bit, sponging each part with hot water and vinegar or weak acetic acid (*see* ACETIC ACID), and rubbing hot oil on after drying. Dry this oil off, and cover each dried part of the body either with clothing or blankets before uncovering a fresh part.

There is a modification of this treatment which suits more weakly persons, and suits also those who must do all, or almost all, for themselves. A long flannel or flannelette nightdress is used in this, instead of the blanket. This is covered on the whole of the inner side with well-made soap lather. When so covered it is

put on at bedtime, and a dry nightdress put on over it. Both are then fastened as closely as possible to the skin, and the patient goes to sleep thus clothed. If the night is cold, the greatest care must be taken to be well covered, and brought to as good a heat as possible. In the morning a very great change will have come from this treatment. When the whole body is washed down with warm water, dried, and nicely rubbed with fresh oil, the skin is found very considerably changed, and in case of asthma the breathing relieved.

If cold is taken when this process is fairly gone through, it would be very astonishing indeed; but if it is badly done, a person might get chilled instead of comforted. Therefore every care must be taken to keep the patient thoroughly warm. The result of one effectual pack is usually sufficient to convince the poor sufferer that he is being treated in the right way. The effect of the second is greater, and so on to the fourth or fifth, beyond which he need not go as a rule. He will do well once a day to wash with hot vinegar and rub after with the oil. These should not be required more than a fortnight at most. If chilliness continues, it is well to put on cotton stockings on going to bed, and even to bathe the feet and oil them before doing so. This bathing may be continued every night for a fortnight.

Sores.—These will be found dealt with under many headings throughout this book (*see* ABSCESS; BONE, DISEASED; BLOOD; BOILS; BREAST; CANCER; CARBUNCLE; CAULIFLOWER GROWTH; ERUPTIONS; ERYSIPELAS, etc.), therefore we here only treat generally of two kinds of common sores. The first is the surface sore, which eats inwards; the second, the deep-seated sore, which eats outwards. The first usually begins as a small pimple like a pin's head, and, if neglected, breaks, and gradually increases in size. Its origin is something which has caused the minute vessels of the skin at the

spot to give way, so that they remain congested with bad blood, which soon becomes practically poisonous, and so the sore enlarges and eats into the surrounding tissue. If such a sore appears on the leg, it is often due to over-pressure through too much standing. Rest, with the leg kept horizontal or inclined slightly upwards to the foot, will often be enough to cure. When complete rest cannot be had, a thigh bandage (*see* VEINS, SWOLLEN) should be worn.

To treat the sore, it should be washed twice a day with BUTTERMILK (*see*), and afterwards thoroughly soaked with weak ACETIC ACID (*see*), and dressed with antiseptic lint, or, if that cannot be had, with buttermilk cloths. A buttermilk poultice (*see* POTATO POULTICE) may be used. But if no rest can be had, the sore will be extremely difficult, if not impossible, to heal.

The second kind of sore, arising from an abscess under the part, or diseased bone or membrane far down beneath the skin, is to be treated on the same principles, using weak acetic acid for the syringing, and buttermilk only for the suface. The method of treatment is such as will secure the contact of the weak acid with *every part*, even the deepest, of the wound. Procure a small pointed glass syringe, which must be kept *thoroughly clean*. The point of this may be inserted into the sore, and care taken that the weak acid penetrates into the very bottom, and thoroughly soaks all the diseased parts. This syringing should be repeated until the wound is thoroughly clean in every part. If pain is set up, the acid is too strong. Syringing with lukewarm water will at once relieve this, and then weaker acid may be used. This treatment may be given twice a day, and the wound properly dressed after it. Attention must be paid in all treatment of sores or wounds to the proper cleansing and boiling of all materials and instruments used. Wash the hands in hot water and M'Clinton's soap, using a nail-brush, before touching or dressing a sore.

Boil some soft clean rags for five minutes, and wash the sore with these, using water that has been boiled and allowed to cool to blood-heat, to which a few drops of acetic acid have been added, but not so much as to be painful on the sore.

If a syringe is used, boil it before using, and only use boiled or distilled water in all operations. This secures the destruction of the germs (or BACTERIA), which are now known as the cause of the inflammation and suppuration of wounds and sores of all kinds.

Spinal Congestion.—In some cases of this trouble the symptoms are very alarming, consisting in violent convulsive movements, which seem altogether beyond the possibility of relief. It is something to know that these terrible kickings and strugglings arise from simply an acumulation of blood in the vessels of the spinal cord, irritating it violently, as an electric current might do. Sedatives and narcotics will be useless. Leeches applied to the spine will sometimes cure by withdrawing the blood from it, though such treatment leaves no bracing and strengthening effect, but the very opposite. Use the cold towel, wrung out and placed along the spine, together with a hot blanket FOMENTATION (*see*) to the feet and legs, up over the knees. The patient must be gently held still, as far as possible, so that the treatment may be applied. The applications will not be at once successful, but after an hour's work something like permanent relief should come. Above all, the nurse must keep cool and calm in mind and manner. There is no need for hysterics, and any excitable person should be kept out of the sick-room. If the skin of the back has been broken by blistering or any such treatment, a fine lather (*see* LATHER ; SOAP) should be spread over all the back, and on this a soft cloth. Above this the cold towels may be safely and comfortably applied. It will do no harm if the treatment be continued for even two or three hours.

Spine, Misshapen.—Often in the case of delicate infants or children, the bones of the spine fail to have the necessary hardness to bear the strain which comes upon them, and the spine gets more or less out of its proper shape. If this softness of bone continues, no amount of mechanical support, or lying down, will cure the misshapen spine. Therefore means should be taken by proper diet and nourishment to help the production of good bone substance in the child's body. The best bone-making food we know is good oatmeal, as well-boiled porridge (boiled for two or three hours), or as oatmeal jelly and gruel. Good air and water are also essential, and such treatment as is described in article on CHILDREN'S HEALTHY GROWTH. Especially should attention be paid to constant supply of fresh air to the child's lungs. Windows should be wide open in all weathers, and if the child cannot walk far, it should be wheeled out for as long as possible every day the weather permits. Such supply of fresh air is of *vital importance*, and the want of it is frequently the sole cause of disease.

In other cases it is not the bones which are soft, but the muscles and ligaments which hold the spine in a proper position are defective. Where the bone is felt to be good-sized and hard, and the surrounding subtance too soft, it is a case of this kind. To proper nourishment, in this case, must be added proper *exercise* of the muscles concerned. Immovable plaster jackets are bad, because they forbid this. This exercise may best be given by rubbing (*see* EXERCISE and MASSAGE). Gentle rubbing and pressure over the back, with hot OLIVE OIL (*see*), will work wonders in such a case. During the rubbing the patient should lie down *at full length*. It must also be done so as to be *pleasant*, or it is of no use.

See that the patient has plenty of rest, and only as much walking exercise as is evidently enjoyed. There may be complications with other troubles—for example, a quick pulse and some fever heat, if the temperature is

tested. That will require to be itself treated with repeated rubbings of finely wrought lather over the stomach and bowels. Until you have in some measure subdued this fever, you will not do much in the way of improving the muscles of the back. In many cases you will be able to bring the fever down completely, and then you will be free to exercise the muscles, and so to strengthen them that they will bring the spine to something like its proper shape. (*See* ASSIMILATION ; DIET ; DIGESTION ; NERVES ; NOURISHMENT ; PARALYSIS ; MASSAGE.)

Spine, Weakness of the.—*See* CHILDREN'S HEALTHY GROWTH.

Sprains or Racks.—A sprain is usually the result of some involuntary stress coming upon the part. If the injury be to the muscular substance only, it is easily healed ; hot fomentations should be given to the sprained parts, with perfect rest and every possible ease and comfort by position, etc., and nature will soon effect a cure. If the injury be really to the *nerves* which control the muscles, as is generally the case, the matter is more difficult. The muscle swells, but this is primarily due to the overstrain of the nerves in the sudden effort they make to bear a crushing load on the muscle. The pain is from pressure in the swelling, and also from inflammatory action.

The cure, then, must be applied to the motor nerves controlling the muscles, and is best applied at their roots in the spinal cord. If the arm, hand, or wrist be sprained, rub gently the upper spinal region with warm olive oil, continuing the rubbing *gently* down the arm to the injured part (*see* RUBBING) until the whole shoulder and arm glow with comfortable warmth. But all rubbing such as causes pain must be avoided. If such rubbing cannot be managed, then a hot BRAN POULTICE (*see*) must be placed between the shoulders, and a warm fomentation given to the shoulder and arm. The treatment

should be given once a day, and ere many days the sprain should be cured. For ankle and knee sprains, the lower back and leg must be treated on similar principles.

Where the chest muscles that cover the ribs are sprained, rubbing and moist heat should be applied over the back and round the side where the sprain is, paying especial attention to the spine opposite the sprain, and using hot olive oil before fomentation and after, as well as to rub with.

If the belly be sprained, similar treatment should be given lower down the back.

If the back muscles are sprained, then the same treatment should be applied, taking special care to stimulate with moist heat and rubbing the part of the spine on a level with the injury, where the roots of the nerves lie which supply the sprained muscles. Care must ever be taken to avoid giving pain—to give pain is to increase the injury. To produce a glow of heat all through the parts is to cure it. (*See* MUSCULAR PAINS.)

For a sprained heel, when there is some degree of inflammation about it, we should pack the whole foot in fine soap lather. Let it be in this all night, and also during the day when resting. Wash the foot with a little weak acetic acid, after being packed in the lather, to keep it quite clean. Now rub the whole limb from the ankle upwards in such a way as to press the blood onwards in the veins. Use a little oil, so that the skin may not suffer till a fine heat is raised in the whole limb. This may be done for a quarter-of-an-hour twice or thrice a day. It relieves the heel of all congestion, and lets good arterial blood flow to it, as it would not otherwise. An elastic bandage, not very tight, put on above the knee will help the cure. Sprained joints and muscles should have *perfect rest* for a fortnight, and be used very cautiously for some time longer.

Spring Trouble.—Many persons are distressed by some form of eruption or inflammation in the skin in

spring. The change of atmosphere and temperature at this time greatly increases the demands made upon the skin as an organ of perspiration, and this strain it is in many cases unable to stand—hence the trouble referred to. To prevent this, the skin must be brought into a better state of health and fitness for any extra work, so that it can bear without injury even very great changes of air and temperature. This may be done by regular application of soap lather (*see* LATHER and SOAP) to the *entire* skin each evening for three or four days, and then twice a week through all the season. Good olive oil may be rubbed on before and after the lather, or even mixed with it in rubbing on; if the cooling effect is found too great, two or three thick coats of lather should be put on, and then gently wiped off, and the oil applied. This, continued during the later winter and spring, should entirely prevent eruptions. But if these do appear, or have already come on, the irritation is apt to be so great that only very fine and carefully made lather can be used. It is better then to use *buttermilk* instead of lather. But the BUTTERMILK (*see*) must be *new*, and if necessary weakened by addition of sweet milk; if old and strongly acid buttermilk be used, harm may be done. Do not *rub* the milk on: *soak* it into the parts by gentle *dabbing* with a pad of soft cloth. This done frequently, even twice or three times a day, will almost always effect a cure.

It should be remembered that no amount of washing or bathing will do in this state of the skin. Water somehow, especially hard water, fails to produce this fine state of the surface. When spring trouble has set in, we would keep water entirely from the skin. Nothing does so well as good buttermilk. In some forms of spring eruption, a strong mixture of salt and water may be freely applied with great advantage. If this irritates, it should at once be discontinued, but in many cases the eruption will disappear under a few applications. The salt solution

should be gently rubbed on, and left to dry on the skin (*see* SKIN, CARE OF; UNDERWEAR).

With the increasing warm weather the body ceases to require as much food as in the cold days. Heavy stimulating food in warm weather will certainly cause an unhealthy skin.

Squeezing.—*See* RUBBING.

Stammering.—This trouble is simply a loss of command of the vocal organs, and is distinctly *nervous* in its cause. Especially must we look to the *roots* of the nerves controlling the vocal organs, if we are to see the real difficulty. There is evidently a state of irritability and undue sensitiveness in these nerves which must be soothed down, if a cure is to be obtained. The roots of such nerves lie in the back of the head and neck, and they are best soothed by application of soap lather (*see* LATHER; SOAP). This must be well wrought, and applied warm to the back of the head and neck in three or four coats. Then mix some *hot* OLIVE OIL (*see*) with the lather, and apply with the brush gently to the parts. Altogether, in applying the various latherings, and the final oil-and-lathering, an hour should be spent, so as to continue the soothing effect during that time. The head may be soaped one night (*see* HEAD, SOAPING THE), and this treatment given the alternate night. Where the case is of long standing, it may take long to cure it, or a cure may be impossible, but some mitigation will result from this treatment. The Sabbath should in all cases be a day of rest from treatment, and generally common sense will indicate that it be not continued too long. The patient may do a great deal for himself by the strictest watch on his enunciation, speaking slowly and deliberately, and breathing deeply. This will be difficult to maintain at first, but practice will make the habit unconscious. An instrument called a metronome may be had from a music shop (used for keeping time in practising), if a book be read aloud by the stammerer,

pronouncing one syllable only to each beat, he will soon gain complete control of his voice.

Stiffness, General.—This is often an adjunct of old age, and sometimes occurs in the young and middle-aged as the result of chills. In *neither* case is it incurable, but for a cure *rest* is a first necessity. If there be standing and working for twelve or fourteen hours a day, we should not expect a cure at all. Rest must be had, at least twelve hours out of the twenty-four, and it is well if sixteen or even eighteen hours' rest can be taken (*see* REST). Then there must be heating the spine with moist heat (*see* FOMENTATION). This is done to revive the organs which supply oil to the joints, by giving fresh vitality to the roots of the nerves which control these organs. But the heating requisite to do this must be gently and persistently applied. An hour's gradual heating is worth far more than half-an-hour's *half-burning*. Then, after the spine fomentation, which must be applied in bed, rub (*see* MASSAGE) the back with hot olive oil for a considerable time—say half-an-hour, if the patient can bear it (*see* EXERCISE). Then the joints may be similarly fomented and rubbed at another time, back and joints being treated, say, every other day. If there be costiveness, treat as in CONSTIPATION, and give easily digested food (*see* ASSIMILATION ; DIGESTION ; NOURISHMENT). Such treatment daily should remove stiffness, even in very bad cases.

Stimulants.—*See* ALCOHOL ; NARCOTICS.

Stomach Trouble.—If you would cure thoroughly, you must first make sure that the skin is doing its part well. Very often indigestion arises from irritation of the stomach, caused by the impurities in the blood which arise from defective skin action.

With strong people, exercise causing perspiration will often suffice to cure, in other cases where exercise cannot be had the SOAPY BLANKET (*see*) is effective. After the blanket, give a warm, gentle rubbing with hot vinegar or

diluted acetic acid ; and, finally, a similar rubbing with warm olive oil. This rubbing may be given by itself, where the patient is too weak to endure the blanket, or where the lather cannot be well applied. Even the rubbing with oil alone will do much to cure.

The problem in this case is to remove from the blood the irritating waste which is inflaming the stomach, and this is better done by cleansing and stimulating the skin than by means of drastic drugs. A lazy man will swallow a peck of pills rather than go through an ordeal of cleansing like this, but in that case he need not be surprised if his poor stomach become only poorer still, while his purse will not get any heavier. Besides this cleansing, take sips of hot water as recommended under INDIGESTION. A very plain and sparing diet should be taken, and great attention given to chewing all food till reduced to a liquid. For it must be remembered that the majority of stomach troubles have their origin in abuse of this organ, through overloading with food, or other dietetic errors. *See* DIET ; ASSIMILATION ; BISCUITS AND WATER ; CONSTIPATION ; CRAMP IN STOMACH ; DIARRHŒA ; DIGESTION ; FLATULENCE ; INDIGESTION ; WEARINESS.

Stomach Ulcers.—Generally the *tongue* will tell whether the stomach is ulcerated or not. If the tongue is fiery-looking, and small ulcers show themselves on it, while food produces pain in the stomach, there is little doubt of the presence of ulcers there. The tongue may at once, in such a case, be brushed with weak acid (*see* ACETIC ACID) or vinegar, so as to cleanse the surface and produce a *gentle* smarting. This brushing will quickly produce a healing change in the tongue, which guides us to the cure of the stomach. This will be attained by swallowing teaspoonfuls of the same weak acid. Two or three of these should be taken at intervals half-an-hour before food. If the case is severe, the skin over the stomach must be carefully soaped, as directed in article on

HEAD SOAPING (*see also* LATHER ; SOAP). The four-ply flannel BANDAGE (*see*) should also be worn. Do not use drugs, such as iron, arsenic, or soda, and avoid all narcotics. Persevere with the weak acid, and a cure will come unless in very obstinate cases indeed. Care must be taken to avoid irritating food. Milk, or milk and boiling water is the best diet. A general symptom is severe pain after eating, relieved by vomiting.

No fluid should be taken hotter than the finger can be held in it. This is indeed a good rule always in matters of food and drink, which are often taken too hot, to the injury of the stomach.

Stone.—*See* GRAVEL.

Stoutness.—*See* BREATH, AND THE HEART.

Strangulation or Hanging.—Often accidentally caused in children or intoxicated persons. Waste no time in going for or shouting for assistance. At once cut the rope, necktie, or whatever else causes the tightening. Pull out the tongue and secure it, commence artificial respiration at once (*see* DROWNING), open the windows, make any crowd stand back.

St. Vitus' Dance.—This proceeds from a simple irritation of the spinal nerves, and is to be cured by soothing the spine with persistent cooling. In mild cases this cooling is easily applied with towels wrung out of cold water, and folded so as to lie at least four-ply thick along the whole spine. If narcotic drugs have been largely used, and the nervous system spoiled thereby, a severer form of the trouble comes on, and requires a good deal of care and persistence in cooling. In all cases the cooling of the spine must only be done when the patient *is warm in bed.*

It will be of great importance, in carrying out this process, to use olive oil in such a way, all over the body, as to help in maintaining the general normal heat. In

addition to these suggestions, it may be well to remark that the appearances in such cases are, as a rule, worse than the reality. For instance, the motion of the eyes and of the tongue makes one imagine that the sufferer has lost all reason, and even consciousness of normal character. But this is not so; the brain may not be affected at all, and the worst feeling is that of weariness. We have seen a patient smiling through the most distressing contortions—that is, most distressing to the ordinary observer. It is of great importance that any one who treats such cases should be *cool* and *kind*.

It will sometimes be impossible for one person to keep the patient in bed and covered with the clothes so as to keep warm. If so, two must do it. It is, however, to be remembered constantly, that the patient feels it much more agreeable to be held within even close limits than to be allowed to throw arms and legs, and head and body about in all directions. This is a most invaluable truth in such cases. It will not do to hold as with an iron grasp, so that no degree of movement is allowed; but you may hold softly, so that no motion, such as will even disturb the bedclothes, shall take place. This must be done so that all the body shall be comfortably warm when the cold towel is laid along the spine and pressed gently to the centre of the back. In comparatively mild cases, we give an hour of this cooling process every morning only, and the warm washing and anointing with olive oil at bedtime; but in such cases as we sometimes meet with, where drugs have done their mischievous work, it is necessary to cool much more frequently. For instance, when the morning cooling has laid the irritation, and the patient is quiet for an hour, or, perhaps, only half-an-hour, the movement returns. The persons applying the cure are afraid to repeat it till another morning has come. But they need not be so. Or, they apply it for five minutes, and are afraid to continue it longer. They may quite safely apply it as long as

they can keep the rest of the body comfortably warm. If they can keep nice, soft blankets well round the patient, as a rule it will not be difficult to keep up all general heat. Let us suppose that, when warm in bed and asleep, the patient wakes up, and the diseased movement begins; it will be well then to ply the back with the cold towel. If the movement is perfectly still in half-an-hour, a rest may be given. If the movement soon returns, the cold can be applied till perfect quiet is had again. This will, perhaps, be secured in twenty minutes or so. A rest and comfortable warming may be given again. If the movement still returns, it may be met by the same cooling process again. If only the heat is kept up all right, the cold towel may be used till the spinal irritation is finally gone.

This simple mode of treatment we have found to be perfectly successful, not only in removing every symptom of nervous irritation, but in giving most vigorous health to patients who, to begin with, were truly miserable-looking subjects. This may be looked for, as well as the mere removal of the malady.

It should be noted that one outstanding feature of St. Vitus' Dance is that the movement ceases *during sleep*. If this is not the case, other treatment is called for. *See* PARALYSIS, and articles under NERVES; SPINE, etc.

Sunshine.—Is a most valuable aid to health, acting as a physical and mental tonic. The sunbath, for either portions of the body at a time, or for the whole body, will be found very beneficial to nervous sufferers, and also to those having a tendency to certain skin diseases. Its tonic effect is very noticeable on the hair, giving it better growth and richer colour. Sunlight should be admitted freely into bedrooms and sitting-rooms, for it is hostile to the growth of many of those microbes which cause disease.

Tapeworm.—The only sure sign of the presence of this parasite in the intestine is the passing from the

bowels of some of its joints or ova. Its presence in the body is a serious matter, always giving rise to more or less inconvenience and disturbance to health. We mention it here because we know of a very good and harmless remedy which will completely expel the worm. This may be obtained from D. Napier & Sons, herbalists, 17, Bristo Place, Edinburgh, postage paid, for 2s. One dose will be sufficient.

We dislike *secret* preparations, yet when we come across a remedy which never fails, we confess to putting aside our dislikes and getting it.

The best thing is, however, to prevent the worm obtaining access to the body. All food, especially beef and pork, should be thoroughly cooked, and all cooking processes, and all places where meat is kept should be thoroughly clean. Where this is the case, tapeworm will never occur.

Tea.—Tea should not be infused longer than three or four minutes, and cream should be used with it. The albuminous matter in milk tends to throw down some of the tannic acid in an insoluble form. It should not be taken too hot, and if taken at a meat meal (which is undesirable), not till quite the conclusion of the meal. Much tea-drinking produces nervousness and indigestion. If taken *very* weak it forms a pleasing addition to the morning and evening meal, but taken as it usually is, and especially between meals, such as at afternoon tea, it is a serious cause of ill-health.

Teeth.—In order to prevent decay, the teeth should be carefully brushed at least once a day, preferably at night, but better still after each meal. There is no better dentifrice than pure soap, and M'Clinton's tooth soap, being specially prepared from the ash of plants and a pure vegetable oil, does not leave the objectionable soapy taste in the mouth which all soda soaps do.

The prevalence of bad teeth is believed by many to be due to processes of milling, which remove the bone and enamel making properties of the grain. So much of the natural salts of the grain are removed to make bread white that it ceases to be the staff of life. A contributory cause is the consumption of large quantities of sweets or candies, especially between meals. White bread lodging in the teeth and thereby producing acid fermentation, is believed to have a bad effect on them, also too hot or ice-cold liquids. Remember also that the teeth cannot be healthy if they are not exercised. The Scotch peasant when he ate hard oat-cake had splendid teeth, as the Swedish peasants who eat hard rye-bread still have. Sloppy foods hastily bolted will ruin the digestion and thereby the teeth, besides depriving them of the work essential to their good condition. If teeth do decay they should be seen to by a dentist at once, as their presence in the mouth is injurious to the general health.

Teething.—At the outset, it must ever be remembered that this is *not* a disease. It is a natural growth, and often is accomplished without any trouble at all. It is, however, a comparatively *quick* growth, accomplishing much in a little time, as a plant in flowering. This *rush* of growth in one place draws upon the vitality available for general purposes in the child's body, and if this vitality is not very large, trouble ensues. Diarrhœa, cold feet, and lack of spirit and appetite thus arise. If at this stage the lower limbs and body be carefully fomented (*see* FOMENTATION), all trouble may cease at once; at least a very great deal will be done to relieve it. Give three teaspoonfuls of warm water, slightly sweetened with pure CANE SYRUP (*see*), three times a day. A little of the confection of senna will do instead of this if desired. The fomentation must never be so hot or so long at a time as to cause discomfort. Irritation is bad for a teething infant, and all must be done soothingly if success is to be gained. Also

it will not do to foment and rub with oil a *feverish* child. Such cases must be treated differently, as we shall see, and it is easy to distinguish them from cases without fever. Meantime we would say that in many cases where vital force is low without fever, the treatment by fomentation as described is of great value.

In regard to the artificial "cutting" of the gum by surgical instruments, we would say that such should only be resorted to when the tooth is very near the surface indeed, and by a careful surgeon who knows what he is about. The irritation in the gums which makes it thought of at all can be usually allayed by simple means. Let the mother dip her finger in good vinegar and water, just strong enough to slightly smart the lips, and rub it on the irritated gum. This can of course be done often, and is most powerfully soothing. It may indeed do all that is required. But if more general symptoms appear, such as sleeplessness and heat in the head, cooling of the head is required. Have two little caps made of *thick* cotton cloth, one slightly larger, so as to fit on above the other on the child's head. Wring the smaller out of cold (but not ice-cold) water, and put it on. Press it gently on the head, and if the heat and restlessness continue, cool it again, perhaps twice or three times. When the restlessness is relieved, leave the damp cap on the head, and place the dry one on over it. If the heat returns, repeat the process. This treatment, though a mere cooling of the brain, has saved ere now both reason and life, and should never be lightly thought of or despised.

Often the stomach is seriously disordered during teething, both vomiting and purging resulting. In small degree these are not dangerous, but they are better avoided. If severe, they are the beginning of often fatal trouble.

To quiet the excited bowels, nothing is better than enemas of cool water. It need not be too cold, but just a little under blood heat, with a little vinegar added.

One tablespoonful of vinegar to a pint of water. Also a "baby's bottle," prepared with water at blood heat (98 deg.), *without any milk or sugar*, will greatly assist the stomach if given to be sucked. In such cases infants usually suck this water greedily. It is most soothing to the stomach. Half a teacupful at a time is enough. In the evening wash the child with warm water and SOAP (*see*), rub all over with warm olive or almond oil, especially the back up and down. Then place a BRAN POULTICE (*see*) over all the back, taking care to have it just comfortably warm. When this is fastened on, an ordinary pocket-handkerchief wrung out of cold water is folded and laid over the bowels. This is changed for a fresh one as soon as heated, and *gently* pressed all over. The milk, if the child is brought up on the bottle, may be given now, reduced in strength for a time. This treatment will often cure without enemas, which may then be dispensed with. Great improvement in health may be expected after a few days of such treatment. A cool handkerchief, similar to that on the bowels, may also be applied to the head, if that is heated.

Some form of head eruption often comes on after a long time of heated head. A little sour buttermilk, vinegar, or weak acetic acid, not stronger than to cause a slight smarting *tried in the nurse's nostrils*, will relieve almost instantly the itching which accompanies this. If strong acid be used, matters are made worse, and great pain caused. The acid, weak as we have described, at once neutralises the irritating substance exuded from the eruption. It also prepares the way for a cure. If astringent lotions are employed, drying the sore, and driving it in on the brain, serious injury may be caused. But if healing takes place under soaking with weak acid, no such result need be feared, for this simply removes the unhealthy state of the part. Water, especially *hard* water, must be absolutely kept away from such a head. No more must be used than is necessary to dilute the

acid; and, if it can be got, the acid of buttermilk is decidedly preferable. The whole body, when feverish, may be cooled in a tepid bath, several times a day if necessary, having the water just at blood heat.

Besides these outside effects, teething often causes brain disorders. (*See* various articles on CHILDREN.) The infant should be watched carefully, and if the eye be dull, and the head heavy with feverish symptoms, the head should be cooled at once as above directed, and if the feverish symptoms are not marked, and the feet cold, the feet, legs, and lower body should be wrapped in a good warm fomentation. Where the trouble has gone so far that insensibility comes on, the treatment is the same, only the cloths had better be wrung out of *iced* water if available. It is important to not only lay the cloths on the head, but to *press* them. Take the little head in your two hands, and so bring the cool cloth close to every part of it, while you lift up a prayer for help from the Great Healer. Keep at this till your feeling tells you it is time to change the cloth. Take off the hot one and put on the cool one. Go on with the gentle pressure again. It does require work, but it is well worth work to save a precious life. You must so work that you will cause the least disturbance possible to the little sufferer. It may be you may require to keep this up for many hours, but you will probably find that some signs of sense appear ere you have gone on very long, and you may see that natural sleep has succeeded the drowse that lay in the worn-out brain. If so, you will allow the head to lie still in the cold cloth, and change only when it gets very warm. If natural heat has been fully restored to the legs and feet, you will let these rest also.

We know of a case where the brain seemed gone, and the medical man abandoned hope; but the head was cooled with ice cloths, while the feet and legs were kept in a hot fomentation, for a whole night, and all danger

was passed by the morning. So that, even in very bad cases, this should be perseveringly tried.

For diet, in teething, the child must get easily digested food, and all "rich" foods—brandy, beef-tea, etc.—must be avoided.

Involuntary starting, and the manifestation of great fear on waking out of sleep, frequently arise from irritation of the spine during teething. The cold compress applied along the spine when the child is warm in bed will relieve this. It may be applied (*see* TOWELS, COLD) twice or thrice a day. If the feet are cold, these may be fomented at the same time. If the head is cold, it may be fomented also. If it is hot, cool it. This treatment relieves the irritation of the mouth, as well as removes the starting. If *both* head and feet are hot, then you need only cool the spine.

In all cases, common sense must be used, but we think we have given sufficient indication of principles to enable a thoughtful nurse or mother to treat successfully almost any case. Where very cold cloths on application cause shivering and crying, either use tepid cloths, slightly cooler than the skin, or warm the *surface* of the cold folded cloth by holding for a short time to a fire, and then apply to the patient. The warm surface thus first touches the skin, and afterwards the cold in the body of the cloth penetrates gradually.

Temperature (*see* HEAT, INTERNAL).

Tempering Treatment.—Much, if not all, of the success in any case of treatment depends on its being properly tempered to the strength of the patient. In putting on LATHER (*see*), for instance, a delicate and nervous child will be greatly annoyed if soaped all over at once. But if one arm be done and finished, then the other, then the breast, and so on to the abdomen, the back, and the legs, *bit by bit*, the effect will be soothing in the extreme. So with MASSAGE (*see*); so also with

applying a cold towel. If it chills and terrifies the patient when suddenly "clapped on," common sense would suggest holding it to the fire till the *surface* is warm. This warm surface will give no shock when applied to the skin, and the cold in the body of the towel will gradually penetrate and do its work. Also, as we have frequently repeated, the *strength* of ACETIC ACID (*see*) must be carefully looked to, when it is used. It must ever be remembered that some of the finest and noblest spirits are inhabitants of frail bodies, which, with right treatment, are strong enough, but suffer terribly in rough hands.

Thirst.—This forms a severe feature in many cases of illness, and has to be treated variously according to its kind. It may be due first to *dryness* in the membranes of the throat and stomach; secondly it may be due to a *concentrated* or *deranged* state of the juices of the body; thirdly, it may be the result of a *burning heat* in the body. It will not be difficult for a careful person to say in any case which of them is the cause. The nature of the disease will indicate it. A little cold water may be given first. If this fails, a cold cloth over the stomach (*see* CHANGING TREATMENT) may be tried. If these are not successful, a few tablespoonfuls of hot water may be given. The first of these meets the simple dryness, the second cures the burning heat, the third meets the case of concentated and deranged juices in the body. A few drops of vinegar, lemon juice, or other fruit acid (*see* DRINKS), will often greatly assist the hot water in its duty. All alcoholic drinks are worse than useless in real thirst. Any power they possess is either due to the effect they have on the artificial thirst they create or to the water they contain. And the danger of rousing or creating the dreadful desire of the drunkard is so great, that they ought never to be given to relieve a patient's thirst.

If the cold water is known, from any cause, to be dangerous to the patient, then hot water will do equally

well. If the thirst arises from some drug which has been taken, then hot water should always be given.

Again, the *locality* of the dryness causing thirst indicates the best method of quenching it. If only the mouth and tongue be dry, then it will be sufficient to wash out the mouth with the water, or acid drink, not swallowing, so as to avoid unnecessary loading of the stomach. If throat and mouth are cool, and only the stomach burns, then the cold towel above that is the best treatment.

There is no need, except in very special cases, for iced water. Tap water is generally cool enough, unless stored in heated cisterns. In this case a little ice may be used to bring it down to a temperature of 45 deg. or so, but not below 40 deg.

Throat Hoarseness.—This is best treated by a good large BRAN POULTICE (*see*) on the back of the head and neck. While the patient lies on this, cold towels must be changed on the front above the "apple" of the throat. Do this for an hour twice a day. Or, if the feet be cold, give treatment as in TEETHING. There must also be *rest from talking*. Procure a good camel's-hair throat-brush from the druggist, and brush the back of the throat well with weak ACETIC ACID (*see*) several times a day, or simply gargle if there is difficulty with the brushing. The brush must be carefully cleansed, and dipped in the *strong* acid after use.

Especially is it necessary to give up, in such cases, the use of tobacco. Where the trouble has lasted for years, it may be slow to heal, and the poulticing may be done only once a week. In ordinary cases, a day or two's treatment should cure.

Many times we have seen a good fomentation of feet and legs alone give very sensible relief. Never be satisfied with putting a hot bottle or brick to the feet. This is a lazy way of dealing with a serious case. Have the feet and legs up to the knees rubbed with vinegar and olive oil, and wrapped in a large blanket fomentation. It is not the

mere dry skin of the soles of the feet that needs warming: the whole legs, especially the muscles, require the moist heat of a thorough fomentation. Circulation is at once accelerated just where it is wanted, so as to lessen the pressure where the vital stream is pressing too heavily and lodging in a dangerous congestion. It is good even if the feet are not very cold, but only cool, to ply this part of the remedy well. Where the patient is strong enough to sit out of bed, a good hot foot-bath will do instead of this fomentation.

Throat, Sore.—The first question in any case of sore throat, is, What is the temperature of the patient? (*see* HEAT, INTERNAL). If this cannot be ascertained, at least we can say whether the patient is feverish or not.

Let us first take the case where there is no fever. Get the patient warmly to bed. Foment (*see* FOMENTATION) carefully all round the neck, first rubbing on a little olive oil. Renew the fomentation every five minutes for three-quarters-of-an-hour at least. Allow rest for an hour. Then foment thoroughly the feet and legs up over the knees. When this is done, and the heat kept up, cool the throat with constant fresh cold towels. Let this go on for an hour. Finally sponge the whole body with warm vinegar. Rub lightly over with olive oil, dry, and allow to rest. Probably the throat will be cured. If not, repeat the treatment the following day.

Where there is fever with the sore throat, first make sure whether the feet are hot or cold. If cold, put on fomentations as above. Even if the feet are only cool this should be done. While the feet and legs are thus fomented thoroughly, change cold towels on the throat every three minutes for an hour. Sponge all over as above directed, and allow to rest. If the feet are hot, cold towels alone are applied to the throat; but if the feet get at all chilled while such cooling is going on, they must be fomented.

If there is vomiting and sickness along with the sore throat, the other symptoms of scarlet fever should be looked for, and medical aid obtained if possible.

But here is a case where the most experienced eye, aided by the best possible instrument, sees nothing wrong in the throat itself, but the cough and difficulty of breathing point to the throat. The trouble is not there, but in the roots of the nerves by which vital energy is supplied to the windpipe and other vocal organs. You must go to the back of the neck, and to the back between the upper parts of the shoulders, and there affect the roots that are really in a state of distressing over-action. If you are skilful enough in applying cold, and your patient has plenty of general warmth, you need nothing more than a cold towel, changed pretty often, and nicely pressed over the proper parts. If this fails, have recourse to a cloth with mustard spread like thin butter on it, say about six inches broad and a foot long. Lay this gently on the spine at the back of the neck, and down as far as it goes. Apply your cold compresses now over this as well as you can, and the violent spasmodic symptoms will be mitigated. If one trial is not sufficient, sprinkle the cold cloth with cayenne. If the result can be reached by the cold cloth alone, it will be best. If mustard or cayenne must be applied, observe very carefully that they should never distress the patient. As much as can be borne quite easily, and no more, should be employed. Whenever a remedy becomes seriously distressing, we may be pretty sure it has ceased to be remedial, for the time at least.

Throat, Sore (Clergyman's).—Those who are in the habit of using their voice much should be very careful to produce it in the proper way. It is noticeable that actors (who learn to produce their voice properly) do not suffer from what is known as clergyman's sore throat.

The voice in speaking should be pitched, as a rule, considerably lower than is usually done, especially

if speaking in public. Any tightening of the throat muscles should be avoided, and the voice sent out from a full chest well expanded.

Those who are musical should take a note on the piano enunciating the vowels in their natural order (ā, ay, ee, o, oo) on this note. Then proceed to the next note; the whole of the octave may thus be gone over. Choose an octave most consonant with the range of the voice.

Then add the consonants: bā, bay, bee, cā, cay, etc., etc. Thus a perfect command over all the possible combinations of vowels and consonants may be attained.

There is absolutely no reason why any musical person should have an unmusical voice, especially since this bad production of the voice often strains the muscles and inflames the mucous membrane of the throat. In connection with this question of music, it should be remembered that almost irretrievable injury to the voice may be done by allowing a boy to continue singing after his voice has begun to "break."

It is not a good plan to be constantly "clearing" the throat whilst speaking. One gets to imagine after a while that it needs clearing when it really does not.

Alcohol and tobacco are both undoubtedly injurious to the voice. A little honey and lemon juice will be found the best gargle if a gargle is required.

Deep breathing is of great assistance in endeavouring to produce the lower note, in fact it is not possible to produce a full note except from a full chest. In this connection it may be said that it has been observed that deep-chested, deep-breathing, slow-speaking people are frequently possessed of certain estimable points of character, such as prudence, firmness, self-reliance, calmness. If one is going to be angry, ten deep breaths might save a world of trouble. (*See* BREATHING, CORRECT METHOD OF).

Thumb, Bruised and Broken.—Frequently a tradesman will strike the thumb or finger a serious blow with

a hammer, in missing a stroke. If not treated properly, the whole hand may be destroyed, but if promptly plunged into warm clean water and kept there, even the broken bones can be handled quite comfortably, and all pain and uneasiness pass away ere very long. Plenty of bathing in clean warm water, and proper setting and dressing, are all such an injury requires.

Toothache.—This trouble appears in two opposite characters. In the one it is cured by rightly applied heat, and in the other by cold. If it is merely the soft substance in the tooth which is affected, local cooling applications will cure, if persisted in. If it be the nerve terminating in the tooth which is irritated, then even the extraction of the tooth may fail to give relief. Both cold and hot applications to the tooth or cheek will then probably prove useless.

In such a case, apply COLD TOWELS (*see*) gently pressed over the head and back of the neck. If the case be a bad one, the feet may be put in a hot bath, or fomented. Persevered in for an hour, this treatment is almost certain to cure. It may take away all pain in a few minutes. After the pain is cured, dry well, and keep the head moderately warm.

But if the toothache is caused by a severe chill to the head, and that be still cold, it should be packed in a hot fomentation. This gives almost instant relief. Rub on a little oil when the fomentation comes off, and keep the head warm.

It should not be difficult to distinguish the cases requiring heat from those requiring cold. In any case, if the first application of either increases the pain, try the other.

Towels, Cold Wet.—A towel of the ordinary kind, and full size, is soaked in a basin of cold water and carefully wrung out until it is merely damp. Prejudice against this treatment is often aroused by putting on the

cloths wet, and in a slack, blundering way, so as to make the patient most uncomfortable. It is then folded and applied to the skin, as directed. While applying the first, a second towel may be in the water. It is then wrung out and applied, while the first is placed to soak afresh. In prolonged cooling, care must be taken that the water in the basin does not get too warm. It should be frequently changed. The nurse should gently press the towels on the part, frequently changing the position of her hands. They should not merely be laid on, but gently pressed, unless this causes pain. The towels will need to be changed when hot, and will take from two to five minutes to lose their cooling effect, according to circumstances. Where cold increases the patient's distress, it is almost always safe to substitute heat. *See* COOLING IN HEATING ; FOMENTATION.

Tumours.—A large, soft, fleshy tumour is usually simply an accumulation of waste material, which should have been excreted from the body if all the organs were in healthy working order. Where such a swelling exists, the first consideration is diet. For this, BARLEY (*see*) as chief food will do very well. Lemon and orange juice (*see* DRINKS) should be the drinks. The barley must *not* be cooked with milk, and the drinks must be made with *pure water*. This plain diet will help very much towards the removal of the tumour.

Then the back should be rubbed (*see* MASSAGE) with hot olive oil twice a day. This treatment alone has often removed the disagreeable swellings on the neck so often afflicting women.

Also, fine soap lather (*see* LATHER ; SOAP) should be gently rubbed repeatedly over the tumour itself. This *alone* we have known remove tumours, so it is important.

The three forms of treatment, all applied carefully, will cure all but very obstinate cases. *See also* ARMPIT SWELLING ; HYDROCELE.

Where fibrous tumours exist, the treatment is to *douche* cold water on the part affected, while the rest of the body is kept warm. In case of such a growth in the abdomen, the patient sits in cold water, while the feet are placed in hot water, and the whole body warmly wrapped in blankets. Cold water is then thrown against the spot where the tumour lies. If the tumour is discovered early, its growth may be entirely stopped by this means. Such treatment for several minutes twice a day has in our own experience cured cases pronounced incurable. *See* SITZ BATH.

Turnip Poultice.—Part of a raw turnip is grated down to a pulp. As much of this is prepared as will cover the inflamed part. It is put on next the skin, and covered with a soft cloth. All is then tied nicely up in another cloth. In violent inflammation of the knee joint, this is a most valuable soothing application. Placed on discoloured and shrivelled skin, it is marvellously curative. When applied, the patient must be *thoroughly warm*. This warmth must be maintained while the poultice is on, as it has a powerful cooling effect.

Typhoid Fever.—*See* FEVER, TYPHOID.

Ulcers.—An ulcer is an "eating sore": that is, a sore containing matter which eats away the skin and flesh, thereby extending itself, and increasing in depth as well. To stop this diseased process, the virulent matter in the ulcer must be killed or neutralised, and this can usually best be done by means of vinegar or weak ACETIC ACID (*see*), which is most powerfully antiseptic. The only difficulty is to avoid irritating the sore by the application of too strong acid. The treatment by weak acid is very effective, but it must be a fairly prolonged and thorough soaking. Apply a little at a time to the sore. Use warm water if pain be caused. Continue the soaking for even an hour at a time, twice or even three times a day. The wound may be dressed

with good fresh olive oil after each soaking. Usually, nothing else will be required, but it must be thoroughly done.

In a very severe case, mix in a teacupful of hot water as much saltpetre as the water will dissolve. Add to this a teaspoonful of acetic acid, and use this to soak the sore instead of simple weak acid. Then, if healing does not come, it is probably because rest is not taken, and most likely also because there is deficient vitality in the whole system. Let the treatment with the lotion be given in the morning. Secure rest during the day, and in the evening, for an hour, thoroughly foment the feet and legs up over the knees. Once a week for two weeks give the SOAPY BLANKET (*see*) instead of this treatment, and in the morning rub all over the body with hot vinegar. This powerfully stimulates the vitality of the whole system. Even a very bad ulcer should give way under a careful course of united acid soaking, rest, and this stimulating treatment.

Unconsciousness.—There are two opposite causes of unconsciousness. One is congestion of the brain, the other sheer nerve exhaustion. Either will produce a prolonged suspension of consciousness very different from a mere passing faint. In the case of congestion, the head will be hot and the feet cold. The cure is therefore at once seen to be to cool the head and foment the feet in a hot blanket up to the knees. This is the treatment usually to be given to young children. When aged people, or those much exhausted from any cause, become unconscious from lack of vitality, there will be rather a *general* coldness, and no special heat in the head. We have seen such a case of "coma," which had lasted for forty-eight hours, come all right in ten minutes, by simply fomenting the back of the head and neck, and all down the spinal column. Press a thickly-folded piece of flannel wrung out of hot water carefully and gently over

these parts, and often in a few minutes the mental power comes back. Care must be taken not to scald the patient. *See* FOMENTATION.

Underwear.—There is a common and very popular error, namely, that of putting too much clothing on our bodies, under the mistaken idea that additional weight means additional warmth. The fact that the main object of clothing is to preserve the natural heat of the body is lost sight of, and little attention is paid to the selection of proper garments for wearing next the skin. Every day the skin of an average healthy individual gives off so many pints of moisture, which must not be allowed to settle on the body if health is to be maintained. After long and exhaustive trials, we have come to the conclusion that the best material for wearing next the skin is knitted linen, and the best knitted linen of the kind, and in fact, the only pure linen mesh material which we have seen, is known as *Kneipp linen*, and can be obtained from all leading retailers and outfitters in this and other countries. The name of the nearest agent may be had by sending a card to the Kneipp Linen Warehouse, 2 Milk St., London, E.C. In winter light woollen underwear can be worn over the linen if desired, thus retaining the hygienic advantages of the linen, as well as the warmth of the wool. As the wool does not touch the skin, it will not require frequent washing, and so will not become felted up.

Linen is the symbol of cleanliness, the priests of old, as we read in Ezekiel, being commanded to wear it, and not wool or any garment causing sweat.

Our reason for specially naming Kneipp linen is that we know it is *pure linen*, whereas we know that what is sold as linen mesh is frequently half linen and half cotton.

Linen is the most absorbent material for underwear. It soaks up moisture very rapidly, and dries with equal

rapidity. Hence linen is always preferred for towels and bandages. Those who use it for underwear will not require to change the clothes after exercise, as they would if wool were worn next the skin. The ordinary woven linen is clean but cold: Kneipp linen is so constructed as to be clean and warm. This material retains air in its meshes, and a layer of dry air next the body is the best method of preserving an even temperature, and thus avoiding colds and chills, which are so prevalent in a climate such as ours. Wool is entirely unsuited for wearing next the skin. It does not absorb the perspiration rapidly nor radiate it freely, and after several washings it becomes felted, and in that condition is absolutely injurious to health. It is the material par excellence for outer clothing, but all inner garments coming in contact with the body should be composed of pure linen. (*See* SKIN, CARE OF).

Uric Acid.—This acid is found in persons of a gouty tendency, such tendencies being a great deal more common than is imagined.

It is really a waste product formed by the activity of the body cells, and should properly be mainly transformed into urea and so excreted. If it is not so transformed it accumulates in the blood and deposits in stony formations in different parts of the body, as in the joints, kidneys and bladder, causing very serious disease. Pure air and plenty of exercise will assist its transformation.

It is also taken into the body in various foods, particularly meat and tea, which are very rich in it or kindred chemical substances, therefore, anyone having such a tendency should avoid these. The consumption of sugar should also be limited. Avoid alcohol and use plenty of green vegetables and fruits.

The tendency to a "uric acid" constitution is hereditary, and is prevalent among families who live high. Such should be continually on the watch lest their diet should

precipitate an attack. Water should be freely drunk, and plenty of bathing with subsequent rubbing of the muscles or massage is advisable.

Drugs are to be avoided as they often result in painful heart affection, and besides do not strike at the real root of the disease.

Soda or lithia water may be taken either with or without milk. Brine baths may be taken when practicable.

Urinary Troubles.—A healthy man usually evacuates about 30-40 ozs. of urine daily, the excretion being greater in the winter than in the summer, owing to the checked perspiration. The urine should be of a pale straw colour and transparent. Where any irregularity in the urine, either in quantity or quality, is suspected, it is wise to use soft boiled or distilled water only, for drinking, and to take frequent sips of it throughout the day, and especially early in the morning. Either pure hot water, hot water and lemon juice, or whey, will help the action of the kidneys when this is sluggish.

Where the bladder is irritated and painfully sensitive, a large hot BRAN POULTICE (*see*) should be applied to the lower back. While the patient lies on this, cold towels (*see* TOWELS, COLD WET) should be changed over the bladder in front. While giving such treatment once or twice a day, *rest* must be taken, if a cure is to be obtained. For a patient to say that rest cannot be had, is to say that cure is impossible.

Where there is a tendency to stoppage of the urine, a warm sitz bath should be taken. The patient first sits in three inches deep of comfortably hot water. More water at the same temperature is poured gradually in at intervals, until it rises well up over the abdomen. This will usually relieve even a bad case.

Treat with bran poultice and cold towels, as above recommended, after the warm bath has given relief. It should be remembered that the *cold* is the healing power,

bracing the bladder and all its muscles and vessels. Hence more than a slight cooling is needed. But the cooling is only possible when good heat is kept up on the base of the back. This treatment also cures the swelling of the bladder which often accompanies restriction of urine.

Where a positive growth interferes with the urinary discharge, this may often be actually *melted away* by soaking with weak ACETIC ACID (*see*), when it is at all possible to reach it. The power of cure possessed by acetic acid is incredible, except to those who have seen it exercised, and its persistent use would, we are use, save many lives, if people would only try it.

We would also advise the four-ply flannel bandage, with two plies damp and two dry. This round the body has a wonderfully soothing effect. So has a nicely applied lathering with SOAP (*see*). As in most other troubles, special care must be taken to keep the feet warm.

Vaccination Trouble.—When a child is suffering after vaccination, we should have him gently rubbed all over—thrice at least with M'Clinton's soap (*see* LATHER). No one who has not seen this well done can believe how blessed are its effects on an irritated skin. It soothes incredibly. When thoroughly covered and covered again with well-made lather of this soap, the child will sleep beautifully. We should soap head and all, and let the little man sleep all night in the soap. He may be sponged in the morning with weak vinegar and water to clean off the remains of the soap, if there are any. Now, there will occur a most important question: Is the child cold or feverish? If cold, then mix some good olive oil in your rubbing with the lather. If hot, use no oil. If cold, rub all over with warm oil before applying the lather. It will make no difference, or next to none, if the disease has broken out as a visible skin disease, only it will be necesary to use the vinegar on the unbroken parts of the skin and not to distress the child by painful smarting. The

soap will not need to be so restricted. That cures the most tender sores, and soothes in a delightful way.

Vegetables, Green, and Fruit.—We would strongly recommend our readers to continually have these valuable foods on their tables. It is possible to obtain them in some form or other during the entire year. They contain very valuable salts, which are of the greatest use in preventing disease. These salts are absolutely necessary for life, and though found in other foods such as meat, are particularly abundant in these vegetables. If cooked they must be carefully prepared, as the salts are very soluble in water (*see* COOKING). Vegetable salads and fruit salads are to be recommended. Those of gouty or corpulent tendencies will find these of especial use. By keeping the blood alkaline they are a preventive of many diseases. Spinach, cabbage, lettuce, and all the fruits offer a variety from which at each season one may choose.

It is to be observed that common salt and salt such as bi-carbonate of soda, do not adequately replace those food salts. Indeed, over-consumption of common salt is harmful, besides leading to unnatural thirst.

Fresh fruits and vegetables are always to be preferred to tinned ones.

Veins, Swollen.—The swelling of veins in the leg is a very common trouble, especially in middle and later life. At first this may cause no pain, one vein appearing as a little blue lump. Then as the trouble increases, knots of veins seem to rise, especially below and behind the knee. Great pain follows, and sometimes the veins burst, causing bad sores, not easy to heal.

All this generally springs from *overstrain* upon the limbs. Long continued standing, in circumstances otherwise unfavourable to health, is the usual cause.

This shows the primary necessity of *rest*. Let the patient lie down as much as possible, or at least sit with

the sore limb or limbs supported on a chair so as to be nearly level. If this can be done thoroughly, all work being given up for a month or so, a cure is not very difficult. But where this rest cannot be had, an elastic band, such as is used by bootmakers to make strong boot gussets, about six inches broad and one foot long, should be procured. Fasten this round *above* the knee, well up the thigh. This will greatly help to relieve the blood pressure on the lower leg, and is better than elastic stockings. Before these bands are slipped on, the leg should be well rubbed or stroked *upwards*, as described at the end of CIRCULATION. This rubbing empties the swollen veins, and gives great relief.

We have seen a man with both legs full of swollen veins ready for bursting, and most painful, get on two such bandages, and go on digging and working with perfect ease, while the veins sensibly contracted with no other application. But it is not necessary nor wise to confine medical measures to the use of such bandages. Rest is in some cases absolutely necessary.

Even where partial rest can be had, it is important to wear these bands and rub as described. But if possible, the patient should rest in bed for one week. To restore power to the relaxed vessels, a large bran poultice should be applied across the haunches behind, rubbing olive oil before and after. Apply this for fifty minutes each night during the week in bed. Wear a broad band of new flannel over the parts after the poultice. In the morning give the same treatment. If in a week the veins are not better, continue the treatment for another week. The elastic band is, of course, not worn in bed, but may be put on on rising as a security against relapse.

We have seen persons over sixty years of age completely cured in this way, when the necessary rest could be had.

If the *skin* give signs, by dryness and hardness, that it is out of order, instead of treatment with the bran

poultice, the SOAPY BLANKET (*see*) may be applied on the first night. The patient may on other nights be lathered with soap (*see* LATHER; SOAP), and the soapy cloth worn on the back for a night or two, sponging all over with hot vinegar in the morning.

Where the veins by bursting have caused sores, treat with weak vinegar as directed for ULCERS, and after each acid soaking, bandage the whole limb (putting lint on the sores and dressing them properly) with an ordinary surgical bandage, just so tightly as to give relief, and not tight enough to cause any pain. Over-pressure injures. This treatment, with the necessary *rest*, will in most cases effect a cure in a few weeks.

Vomiting.—In many cases of severe illness, the stomach rejects all food, and the patient comes near to dying of simple starvation. On the slightest nourishment being taken, retching and vomiting ensue, the stomach being irritated beyond all possibility of its doing its work. This occurs in cancer and ulcers in the stomach, as well as in various disorders and stomach inflammations.

"Rum and milk," "claret," and all alcoholic drinks are most injurious in such cases, and should *never* be given. To soothe the irritation, the stomach should be soaped in the same manner as recommended in HEAD, SOAPING THE (*see also* LATHER). We have seen, even in very bad cases of cancer, such an application cause all retching to cease almost at once. When this has been carefully and gently done, give exceedingly small quantities at first, of infants' food, or milk and boiling water. To give any "rich" things is a fatal mistake. Oatmeal jelly may be given also, but beginning with a teaspoonful at a time (*see* ASSIMILATION; DIGESTION; NOURISHMENT). By gradually working up the amount, a patient's life may be saved on this simple oatmeal jelly which would be lost if richer things were given. Often

the stomach rejects food simply because it is surfeited. It may be that the liver is out of order, having had too much to do. Abstinence from food for a day or two, and then reducing the meals to two, taken, say, between 10 and 11, and 5 and 6 o'clock, will greatly help. Masticate the food till it is reduced to a liquid, in this state the quantity required will be wonderfully reduced and the work of the stomach lessened.

Water, Hot.—The frequent prescription in these papers of hot water, to be taken often in small quantities, makes it of importance that some explanation of its action should be given.

We see, frequently, such a thing as this: a person is confined to bed, sick and ill; there is no desire for food, but rather a loathing at the very idea of eating; distressing symptoms of various sorts are showing that the work of digestion and assimilation is going on badly, if really going on at all. The patient is started on a course of hot water in half-teacupfuls every ten minutes. When this has gone on for perhaps six or seven hours, he begins to be very hungry, and takes food with relish, probably for the first time for months past. In the meantime a greatly increased quantity of water has passed from the body one way and another, but has all passed loaded with waste material. The breath is loaded with carbonic acid and other impurities; the perspiration is loaded with all that makes it differ from pure water; the urine, especially, is loaded with waste separated from the blood and tissues of the body. The space, so to speak, left vacant by all this washing away of waste matter makes its emptiness felt by a call upon the stomach to furnish fresh material. Some will say that the hot water merely passes off by the kidneys without entering the circulation at all. This is impossible, and facts, patent to everyone, demonstrate that they are in error. The substances with which the water becomes impregnated show that it has

been mingled with the circulation, and the wholesome effects produced prove that it has made itself useful.

"Hard" water, as it is called, will not do so well as "soft" water. Distilled water is best of all. So much superior is it, indeed, that its use cannot be too strongly insisted on. It can be had from the druggist at twopence per quart.

Where nourishment is given with too little water, the food will often fail almost entirely to enter the circulation. But a little warm water, somewhat above blood heat, but not too hot, will make all right. This is especially seen in nourishing infants (*see* INFANTS' FOOD). Food, then, will not act as water does, nor will water act as food. Even a little sugar mixed with the hot water completely alters its effect on the body. As it has already dissolved the sugar, it cannot dissolve what is needed to be removed from the body. Sugar and water is not a *bad* mixture, but it will by no means do instead of pure water in the cases we contemplate. On the other hand, a mixture of alcohol with the water is ruinous, and that just in proportion to the quantity of alcohol, small or great. Beer, for example, can never do what is required of water, nor can wine, or any other alcoholic drink. Tea added to the water also alters its quality. The water *alone*, and as nearly perfect in purity as it can be got, is the only thing which will do the necessary work.

Sometimes one finds a great prejudice against hot water. You see one who is miserable through derangement of the stomach and digestive organs, and you mention "hot water." The very phrase is sufficient to put an expression of strong prejudice on the face. Yet that very hot water is perhaps the only thing that will cure the patient. If you wait a little, there will be an opening to explain that hot water is very different to tepid water. Under blood heat, and yet heated, water tends to produce vomiting; above blood heat, nothing will so well set the stomach right. This is true, however, only when

the water is taken in very small quantities. You must see that the water is not smoked in the heating or otherwise spoiled. And also that it be not too hot. If it scalds the lips it is too hot. When it is comfortably warm, but not tepid, it does its work most effectively.

Water for Drinking.—Every care should be taken to have drinking water absolutely pure. Diarrhœa and many infectious diseases may be conveyed by impure water. In gouty cases as much water should be taken as possible (provided the heart is sufficiently strong) in order to wash away the waste matter. The same applies to fevers. If there is a suspicion of water being contaminated mere filtration should never be relied on, the water should be boiled.

After many of the treatments given by us in this book, considerable thirst will be experienced. Cold water in such cases may always be given. In fact, in any internal congested condition cold water will stimulate the nerves of these organs, and make them act on the blood vessels. In all cases where drugs, especially mineral drugs have been recklessly indulged in, cold water should be taken in abundance. Care must be taken, however, not to unduly stimulate the circulation or nervous system, and any signs of this, such as headache or want of sleep indicate the curtailment of the amount drunk.

Water in the Head.—In cases where this trouble is suspected, very often there is nothing wrong but a more or less congested state of the brain, owing to some severe chill or some disease elsewhere in the body. There may be violent heat in the head, and even the "drowsiness" which is so serious a symptom, without any real "water in the head" at all. Leeching and blistering in such a case are grave mistakes. Cold towels (*see* TOWELS, COLD WET), or a gentle pouring of cool water on the head, will often be sufficient to remove all trouble. We have seen a bad case of brain congestion

cured and consciousness return almost immediately after the pouring had begun. The feet also may be fomented (*see* Fomentation). The cold towels and pouring may be used alternately on the head, which will give a more powerful effect. Let the water poured be almost lukewarm, a little under blood heat. There is no need to cut the hair, or use any acid or drug in the water. The *cooling* is all that is needed. Incipient water in the head may in a very large number of cases be checked and cured by the same treatment. It can do no harm in any case, and has saved many lives.

Water on the Chest.—Sometimes a large watery swelling appears in one part or another of the chest. It is practically a bag of liquid waste, due to deficient action on the part of the kidneys or skin. Treatment should be given as recommended in Dropsy, and, besides, the four-ply moist flannel bandage should be worn over the skin. This will in many cases speedily effect a cure.

Weakness.—Often there follows, after the cure of an inflammatory disease, very great weakness. This in itself is sometimes a great danger, but can usually be removed by proper care and nursing. The common method of administering wine, brandy, or other alcoholic liquor, is the very worst that could be adopted. Hot water will prove a valuable stimulant, when a stimulant is required. Any nourishment (*see*) to be given should also be just a little warmer than blood heat. For drink, the unfermented wine made by Frank Wright, Chemist, Kensington, London, is of great value. It is simply the pure juice of the grape. If milk be given, it should always be diluted with an equal bulk of boiling water. The fomentation of the feet and legs will greatly help in restoring vigour. This should be done gently at first, where the weakness is great. Afterwards, when the patient can bear it, the armchair fomentation (*see*) will be found serviceable. All this, of course, is on the

assumption that only *weakness* and no fever is the trouble. Where fever is present, other treatment is necessary.

Sponging all over with warm vinegar is also a most invigorating thing. Do this once, and afterwards the treatment may be varied by the real stimulant of cayenne being used in the form of an infusion strong enough to rouse the nerves, as is done by the acid. This has the advantage of saving the skin, if that is tender, and keeping off eruption, which is apt to come if the acid is often used. We think it well to use the acid once or so, and the cayenne infusion as frequently as anything of the kind is required. Rubbing with olive oil is also most beneficial. But both must be done very cautiously where there is great weakness. To rub the whole body at once will then be too much. But it may be done bit by bit, stopping whenever fatigue or chilliness is felt by the patient. *See also* HEAT AND WEAKNESS.

Weaning.—Many of the troubles which come in this process arise simply from ignorance or want of thought on the part of the nurse or mother. Sometimes the child, having been burned with a hot teaspoon, will afterwards refuse all that is offered in such a spoon. In such a case use an egg-spoon of bone, or a small cup. Sometimes spoons of various metals, having peculiar tastes, are used, and the child refuses them. When food is refused, it is well therefore always to see that it is not the spoon or dish which is the real reason.

Again, food ill-fitted for the child's digestion is offered. In this case the child is doing the right thing in refusing it. Milk and hot water, in equal quantities, with a very little sugar, is a mixture which can always be given with safety. In weaning, the nurse should begin by using this alone. Gradually a very little thin oatmeal jelly may be added, and the strength of the mixture increased. If there should be indigestion, a few teaspoonfuls of hot water will usually cure it. If the bowels are inactive, mix a

little pure CANE SYRUP (*see*) with the food. Avoid all drugs as far as possible. If the whole process be *gradual*, there will usually be little or no trouble with the child. If, where teething and weaning are both coming together, the child should be seized with chill and shivering, a good blanket FOMENTATION (*see*) may be wrapped round the body and legs. Dry after this, and rub with warm OLIVE OIL (*see*). Generally this will induce sleep, in which case leave the child *warm* in the fomentation until it awakes (*see* TEETHING).

In weaning, the mother often suffers as well as the child. The supply of milk in the breast being overabundant, the breasts become hard and painful, and feverishness comes on. In this case the breasts must be emptied, either by some other person, or by the various ingenious instruments sold by all druggists. Then a large, cold damp cloth should be placed over the emptied breast, and changed once or twice, rubbing afterwards with a little olive oil. This, in ordinary cases, will cause the flow of milk to cease. Where the swelling is very hard and almost inflammatory, the breast should be fomented for five or ten minutes, then emptied, and a cold cloth applied as above directed. If all this fails, a BRAN POULTICE (*see*), or hot bag with moist flannel covering, should be applied between the shoulders. While the patient lies on this, cold towels (*see* TOWELS, COLD WET) should be changed on the breasts. This will usually effectually stay the secretion of milk. This last treatment is rarely required, but is harmless and most efficient.

Where mother and child are both sickly, weaning must be carefully conducted. But it must ever be remembered that a child is far more healthily nourished on a bottle of good cow's milk or condensed milk (of *first-rate quality*) than on a sickly mother's milk. This is the case even if the child be ill. Only let the bottle not be too strong. *See* CHILDREN, numerous articles.

Weariness.—Where persistent weariness is felt, and the least exertion brings on a feeling of lassitude, there is evidently an undue exhaustion of nerve force in the body. Too rapid action of the heart is a frequent cause. In such a case all exciting ideas and influences should be kept from the patient's mind, and rest taken. The heart's action should also be reduced by careful lathering with soap (*see* LATHER ; SOAP). Where the weariness is really serious, great care must be exercised, and treatment very gradually administered. Rest must be given whenever exhaustion shows itself (*see* HEAT AND WEAKNESS; WEAKNESS ; and articles on NERVES and NERVOUSNESS). Where the heart's action is very slow, and requires to be stimulated, REST (*see*) must be taken, and treatment given as recommended in the case elsewhere. *See* DEPRESSION.

In other cases we find weariness arising from an irritated state of the stomach. Where there is no particular nerve exhaustion, the fiery and inflamed state of the stomach membranes forbids sleep, and causes a great feeling of tiredness. HEADACHE (*see*), and even fainting fits, sometimes come on in such a case. All the nerves are excited, so that even touching the head or skin is most painful. Yet all can be traced to an inflamed stomach as the cause. Such a case, to be successfully treated, requires considerable resolution. In one case the treatment was as follows: First, the feet and legs up to the knees were wrapped in a large FOMENTATION (*see*). A cold wet towel was then folded lengthwise so as to be four-ply thick. The end was laid on the stomach, and *gently pressed*. In about half-a-minute it was hot. The towel was then shifted so that a fresh cool part lay over the stomach, and so on throughout the length of the towel. Handfuls of finely-wrought soap LATHER (*see*) were then prepared and laid on the stomach. Then the cold cloth was again renewed on top of the lather. For *two hours* this was continued, and by that time the worst symptoms had abated. A little fresh oil gently rubbed over the stomach completed

the treatment for that time. When the heat again arose, the same treatment was repeated, and so on till a cure was effected. Five or ten minutes' cooling would have been utterly useless. The heat evolved in the stomach required two hours steady cooling, and might have required more. The feelings of the patient are ever the best guide in such a case. As long as the cooling feels "delightful" it may safely be continued, if the heat to the feet is kept up.

If the weakness is very great, it may be necessary to keep to milk and hot water, such as an infant would thrive on, for a short time. If the weakness is not so great, it will be possible for the patient to take a little gruel or porridge made from wheaten meal, and also good fresh buttermilk. The stomach may be far from ready to take eggs and such things, but quite able to digest the "poorer" food, as it is often called. To give the really weak as perfect rest of mind and as easily digested food as possible, are conditions that must not be overlooked if we would be successful in their cure.

White Leg.—When a limb becomes swelled and white, pouring hot water very gently over it with a sponge or cloth will have a blessed effect. It may be continued for an hour at a time for several times. If this ceases to be comforting, it should be discontinued and the limb dressed with warm olive oil, a soft cotton rag being put next the skin, and soft flannel above that. Of course absolute rest should be taken.

Whooping Cough.—The cough is a spasmodic action of nerves which are otherwise healthy enough, so that when the violent action ceases, the child's health is much as usual. Any irritation of nerves or temper will, however, bring on an attack, and should therefore be avoided, and all soothing mental influences should be encouraged. Three or four teaspoonfuls of hot water taken frequently, and given whenever an attack comes on, will give great

relief. We have ourselves seen a child thought to be dying relieved at once by nothing more than this. Therefore it should never be neglected as too simple.

Also the feet should be bathed once in two nights (*see* BATHING FEET) in warm water (not too hot), dried and rubbed gently with olive oil. On the night when the feet are not bathed, let the back be lathered with *warm* lather (*see* LATHER ; SOAP), quickly dried off, and then a little olive oil *gently* rubbed on.

In ordinary cases, this will be sufficient to ward off all danger in the disease, but in severer attacks the feet and legs may be fomented (*see* FOMENTATION) while the child is in bed, and cold towels changed along the spine while the fomentation remains on, so as to lower the nerve action over the main centres. This is best done in the morning before the patient arises. If anything like inflammation sets in in any part of the chest, treat as recommended in BRONCHITIS or LUNGS, INFLAMMATION OF.

As far as possible, all causes of irritation to the patient must be removed or avoided. In the time of whooping cough, the sunniest way of managing the child is the best.

The other children, if any, in the house, should have the footbath and oil, and the back wash, as recommended above. This will lessen danger of infection, and make the attack lighter if they should take it.

Worms.—Where the juices and organs of the body are thoroughly healthy, worms will not appear. Before they can breed, there must be more or less of failure in the patient's health. This shows us that the cure for worms is not so much some poisonous substance which will destroy them, as such an increase of healthy action in the system as will prevent their development. The bowels must be kept open by suitable diet as it is most important to avoid CONSTIPATION (*see*). In case of worms

in children, stimulus and help are specially needed by the *mucous membrane* or inner lining of the stomach and bowels. To give this, and at the same time to neutralise and remove waste material from the membrane, a little vinegar and warm water may be frequently given, in teaspoonfuls. This is best taken from an hour to half-an-hour before meals. It is often needful to use some soothing, nourishing substance, such as liquorice, boiled with a little camomile, taken, say after meals, while the acid is taken before them: this has an excellent effect. At the same time, an enema of warm water and vinegar should be given twice a day. Where SANTOLINA (*see*) can be procured, its use will speedily effect a complete cure. Change of air, holiday from lessons, and any other means of increasing the general health, should also be utilised.

Worry.—One of the most fruitful causes of ill-health is the habit of worrying. Many believe this to be unavoidable, and think it even an evidence of interest in their work or of consideration for their friends. But this is not real interest or real consideration. The person who faces the work of the moment without anxiety for the future or useless regret for the past will accomplish his task before the harassed careworn man has thought out how to begin it. It is not work that kills but worry. Illness is frequently brought on by worry. Worry wrinkles the face, makes us look old before our time, often makes us sour and disagreeable, always makes us more or less wanting in true politeness, and is socially a great handicap to a man, a much greater to a woman. Further, worry not only prevents cure but kills, and nothing will help us more in recovering from illness than a calm, contented spirit.

Now the first thing to do to overcome this habit is to realise that *worry is a bad habit which it is quite possible to get rid of.* The proof of this is that thousands of people for years slaves to it have got rid of it. Through some

means or other they have been brought to exercise their will power and have found, sometimes to their considerable astonishment, always to their inexpressible relief, that they have regained a lost mental power and that their efficiency as workers has been enormously increased.

If any matter needs much thought, devote thought to it, reflect and weigh carefully. If it requires time, take it up at separate times. Only make up your mind to this one thing, that you are the master and the arbitrator as to when it shall be taken up. If it intrudes, dismiss it as you would a servant from the room when you no longer require his presence. It is bound to go when you do so dismiss it. When you summon it to your consciousness concentrate your mind upon it. Want of concentration, being a dissipation of the mental powers, is a cause of worry.

Worry becomes doubly baneful when it is directed towards the "might have been." Legitimate regret should be an emotion always accompanied by the determination to learn by experience. Every aid to enable the dispossessed will to regain its rightful throne should be employed. Properly chosen books, companions, and surroundings, are of great use, but perhaps quiet persistent self culture of the will, will be found to be the best. It matters little whether you call this "self suggestion" or not. As a matter of fact it is simply the common-sense of the question. It is the making up of the mind to do a thing with certain aspirations, emotions, and desires towards this thing. Thousands of people do it every day, especially in religious matters. It needs an adequate motive or a great ideal to carry it out. Such a motive here, might be the realisation of the uselessness and the positive harm of worry. Actually realise this, then affirm your determination to avoid worry and you have well begun the battle. Go through this mental exercise each time you feel you are worrying again. After a while you may omit it all but the mental determination.

The mind cannot act rightly in an unsound body, and there is no doubt that good health wards off worry. Deep breathing of fresh air by producing well oxygenated pure blood, will do much to restore mental balance, especially if this want of mental balance is, as is often the case, partly due to inattention to the laws of health.

Worry is by no means a necessary concomitant of high civilisation, it is rather an accompanying mental disease due partly to low nerve power, which itself is due to erroneous methods of life—errors of diet, want of pure air, cleanliness, exercise, etc. Partly, too, is this low nerve power due to mental causes peculiarly Western. The *Asiatic* with his power of concentration, reflection, contemplation, with his patience, endurance, calmness, knows nothing of this scourge of European and American life. Even the Japanese, progressive and efficient as they are, possess this native contented, sweet, calm disposition, a habit of mind which, if they can retain, will be of enormous value to them in coming years.

Wounds, Bleeding of.—After sending for a surgeon the first thing to be looked at in case of any wound is the bleeding. Sometimes this is trifling and needs no particular effort to staunch it. When, however, a vein or artery has been lacerated the flow must immediately be attended to.

If the blood be welling up from the wound and of a dark red colour it is venous blood, if it spurt up from the the wound and be of a bright red colour it is arterial blood. What has to be done is to place a pressure on the vein or artery to prevent the blood escaping.

Venous bleeding may generally be stopped by putting a pad of lint dipped in cold water on the wound and tying it on with a bandage. If the blood continues to flow, tie a bandage round the limb on the side of the wound *away* from the heart and keep the limb raised.

Arterial bleeding must be treated by tying on the pad and bandage, and if the bleeding continues, stopping the

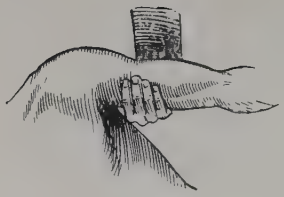


Fig. I.

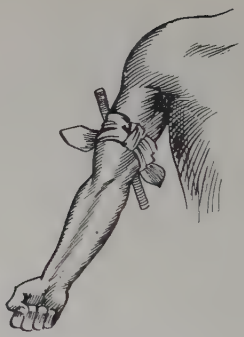


Fig. II.

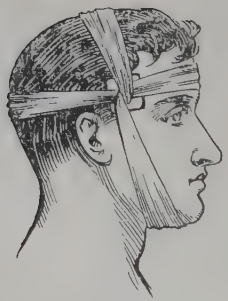


Fig. III.

Fig. IV.

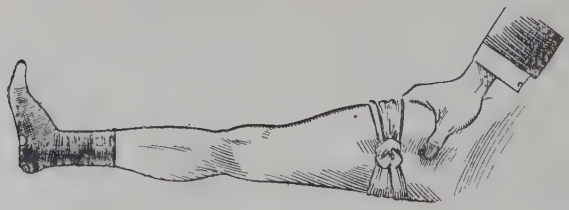


Fig. V.

flow in the artery on the side of the wound *nearest* the heart, and at some point where it passes over a bone so that pressure may be efficiently applied. The bandage for thus tying an artery may be simply made by knotting a handkerchief (Diagram IV.), putting something solid inside the knot, then placing the knot on the artery at the desired point and tying tightly. If required this may be tightened by putting a stick under and twisting round, then tying the stick in position (Diagram II.).

If the palm of the hand is cut, put a pad inside the hand, close the fingers, and tie the bandage round the clenched fist.

If the wound is in the forearm, put a pad in the bend of the elbow, and tie the forearm firmly up on the arm. If the wound is above the elbow stop the main artery in the way above indicated. This artery runs pretty well under the inner seam of the sleeve of a man's coat. Diagram I. shows how this artery may be stopped by direct pressure of the hand ; Diagram II. how a tourniquet may be applied.

For bleeding in the arm-pit, press in a pad and tie the arm down to the side. It may be necessary here to compress the artery with the thumb. The artery here lies behind the inner bend of the collar bone lying on the first rib.

In case of arterial bleeding about the head apply the bandage as in Diagram III. The pressure is here applied right over the wound, as the skull is always behind on which to press the artery.

A wound in the leg should be treated in a similar way to a wound in the arm. Diagram V. shows the stopping of bleeding above the knee.

Do not remove the pressure until the arrival of a medical man.

Wounds, Ill-Smelling.—For all such wounds, the best method is frequent cleansing with vinegar or dilute ACETIC ACID (*see*) by means of a small glass syringe, such

as may be got at any druggist's (*see* ABSCESS; WOUNDS, SYRINGING). We know one case where the patient was expelled from a curative home because of the evil smell of his wounds, three careful cleanings out with dilute acid so removed all odour that the patient was at once readmitted. Where the wound is very tender, soak soft cloths or lint in the dilute acid, and lay them on the wound three or four ply thick. Remove and renew them every quarter-of-an-hour till the smell is gone. Of course the cloths should be immediately washed or, better, burned. In using the syringe, care should be taken *to suck out* the ill matter, as well as to send the dilute acid well down into the sore. Careful cleaning of the syringe with *boiling* water before use is necessary.

Wounds, Soothing.—During the process of *healing*, wounds often give a great deal of pain, even when all is going well. It is this pain we here show how to relieve. After an operation under chloroform, itself painless, the process of healing is often very painful. We are sure this pain need not be endured, but to prevent or cure it we need to see what is its cause. Two causes are specially notable—*pressure* and *cold*. By skilful handling and bandaging, undue pressure may be avoided by the surgeon. But a great deal can be done by any one to keep cold from the seat of injury. Have a bag of soft flannel, as fine as possible, made so as to surround the wounded part. This bag is filled with *dry* bran, heated in an oven or otherwise, without being wet. Of course the heat must not be great enough to cause any discomfort, but sufficient to give a fine sense of relief. This application is for a wound which has *not* become inflamed, but is doing well.

When inflammation has set in, and the patient is fevered, the opposite treatment is applied. Over the dressing apply three or four folds of dry cotton cloth, and over this again apply cold towels (*see* TOWELS, COLD

WET) until the pain is relieved. Good sense must regulate this treatment, of course, and excess of cold be avoided. But with ordinary care this need never cause anxiety.

Wounds, Syringing.—Very great good can often be done by a little careful syringing of internal wounds. Take, as an illustration, a case of a kind we have often seen. It is that of a young patient with a wound on the lower part of the leg, a good long way below the knee. This wound will run in spite of all that has been done to dry it up. The opening in it is very small, and one would think it ought to be easily cured, but it is not so. The truth is that this wound is from two to three inches distant from where the real sore is situated in the limb. The wound is well down towards the ankle; the real sore is well up towards the knee. There is a corroding matter generated in the internal sore, and that runs down under the skin, and keeps cutting its way out at the wound. Until this is rectified, there will be no successful healing. Ointments that might do well enough on a small external sore have no effect in this case. The real sore, however, is easily reached and cured by the right use of a small pointed syringe. The kind most easily procured is made of glass, and costs about sixpence. Choose one that has a small smooth point, which can be easily inserted into the hole in the wound. This should be done without causing any pain. The point of the syringe should be dipped in hot water till it is as near as possible to blood heat: that is, it should neither be hotter nor colder than the skin it has to touch. If you are sufficiently careful on this point, all else will be comparatively easy.

Before you actually try to insert the syringe, observe in what direction the wound is likely to be extended under the skin. It will probably be upwards—almost certainly it will be so, as the waste matter, by its weight,

tends to fall down. The sore at the top insertion of a muscle near the knee will send its matter down the leg, perhaps near to the ankle. Fill the syringe with warm water only, as near blood heat as you can have it. When you have got the point of the syringe even a very little way into the wound, you can inject a little water, and in doing this you will probably learn more nearly where the actual sore is to be found. The water will probably come out as fast as you send it in, but it may not come till a good quantity has gone in. Now, as you fill your syringe a second time with water at the same degree of heat, you will add a single drop of strong acetic acid, or twelve drops of white vinegar to a teacupful. You must be careful that this is not exceeded at this stage, or you will cause great pain. Moreover, you do no good to the sore by making the acid so strong as to cause suffering. If it is only just so strong as to cause a comfortable feeling of warmth, it will be all right for its curative purpose. Even very weak acid combines with the irritating waste matter that is keeping the sore diseased, and produces the desired healing effect. You have only to add one drop after another of the acid to your full teacupful of warm water, till the feeling produced by the syringing is all that could be desired. In the case of the limb that we refer to, a sensible mother used the syringe and the acid so skilfully as to heal the internal sore in a very short time, and thus the external wound quickly disappeared. Of course, if the wound is so very deep that the acid cannot be got up to cleanse it thoroughly, surgical aid should be sought.

It may be well, however, to take another case or two for further illustration. Here, then, is a decayed tooth extracted, but the part from which it is taken does not heal, as is usual. The hole in the gum does not close, and a discharge of offensive humour flows from it constantly. The bone of the upper jaw is evidently wasting, and the decay has extended somehow considerably

up the side of the nose. The hole, however, is so small, that the usual glass syringe cannot enter it. We got an exceedingly small instrument, used for the injection of morphia under the skin. The point of this syringe is a needle with a point that is hollow nearly to the very end. When this point was broken off, the hollow part was so small that it entered the hole in the gum, and so it was easy to inject the weak acid up to the bottom of the sore, which had come to be only a little under the eye. About an inch and a half of hollow had to be washed out with the acid. But in a very short time all discharge ceased, and the cure was perfect. Both of these cases are comparatively simple, but they show clearly the great value of this use of acetic acid.

Carbolic acid is much more commonly used for such a purpose. It has the drawback of being liable itself to melt away the healthy tissue, and to make a wound larger. Acetic acid never does this, and so heals more quickly and certainly.

We might take a much more difficult case. It was that of an abscess and bad sore in the lower bowels. It was supposed to be necessary to perform a very dangerous operation in order to try to cure this—not much hope was held out of its being possible really to cure. It was, however, quite possible to reach the sore by the injection of acetic acid. The sufferer was directed to have this done regularly. In a very short time there was a complete cure. In such a case all that is wanted is an ordinary indiarubber enema. A much larger quantity of water is required, but about the same strength of acid. First of all, as much acidulated water as can be taken up with comfort is injected: after a minute or so this is passed off. Then another is used in the same way, and passed off also. A third syringing may be employed, when about half-a-teacupful is taken and retained. If the acid gives no comfortable feeling of warmth it needs to be strengthened till it does so, but not so that it produces

any pain. The operation really well done is not in the least painful, but, on the contrary, rather comfortable.

There is still one syringing which we may notice—that of suppurating ears. If an ear is discharging from some internal sore, nothing is more important than syringing with acetic acid, but it must be done with very peculiar care. The water used should be as nearly as possible of exact blood heat, and the acetic acid of the exact strength at which it will give a fine comfortable feeling in the ear. It must neither feel as if it were a mere wetting of the ear, nor that it gives the least pain. The syringe, too, must be used gently, so as not to force the water strongly against the internal parts that are so tender. It is a soaking operation rather than a forcible urging of the water into the ear which is wanted. If this is nicely done, say twice a day, the acid will reach the sore, and we may confidently look for a cure. Even when the bones are wasting, as we have seen in the case of the upper jaw, if this acid can be really brought to bear upon the sore, it will be cleansed and healed. In this simple way we have seen many, both old and young, delivered from sore trial, and made to enjoy life and health again.

PHYSICAL CULTURE.

Much weakness might be prevented and often cured by light gymnastic exercises practised twice a day, say on rising and at bed-time, giving tone to the muscles and bringing into regular use many which in ordinary daily life are seldom or never used. The various vital organs of the body owe much of their health to the proper exercise of the surrounding muscles; it will be seen then how necessary a system of regular exercise must be. The best way to learn this is to take a course of Swedish Drill or other good system at one of the gymnasiums which are now so common in Britain and America. But as many of our readers live in places where such cannot be had, we shall try to indicate by diagrams some simple movements which can be practised by anyone.

A few general rules should be borne in mind :—

Begin with a short time, say five minutes; omit at first the more fatiguing movements and gradually increase as the strength improves.

The time spent need never be long; fifteen or twenty minutes is long enough at any one time.

Do the movements slowly and deliberately, stretching the muscles to their full extent.

Fix your mind on the particular limb that is being exercised.

Practice in a room with open window, with little clothes on, or with none; a daily air-bath is very conducive to health.

Each exercise need not be performed more than three times, until strength is fairly great.

Never go on with the exercises so long as to be more than just a little tired.

It is a good plan to write out the exercises clearly on a good-sized card or sheet of stiff paper, which can be set where it will be easily seen while one is exercising.

Fig. 1.

Fig. 2.

Fig. 3.

1.

POSITION 1.—Stand before a glass with head well up, chin in, neck elongated, shoulders down and back, arms hanging straight down, abdomen in, back slightly curved, heels together, toes slightly apart.

2.

ARMS BEND.—While in position, bring the arms up at the sides so that the tips of the fingers touch the shoulders. Return to position 1.

3.

HIPS FIRM.—Place hands on hips, well back, fingers together, and thumbs to the back. Now, slowly bend the head back as far as it will go, and slowly raise it again, taking care all the time to keep the chin in. Position 1 again.

Fig. 4.

Fig. 5.

Fig. 6.

4.

NECK REST.—Bring the arms up on a level with the shoulders, hands straight with forearm and finger tips nearly but not quite touching behind the neck. Head always quite erect. While in this position, bend the body from the waist sideways, first to one side, then to the other, as far as it will go without moving the feet. When bending to the left, *feel* the muscles of the right stretching and *vice versa*. Return to position 1.

5.

Bring arms to position 2, then extend them straight upwards, rising on the toes at same time and drawing the body to its greatest height. Bring arms again to position 2 and then down to position 1.

6.

Bring arms to position 2 and extend them sideways, turning palms and hands downwards. Come back to position 2 and then position 1.

Fig. 7.

Fig. 8.

Fig. 9.

7.

Bring arms to position 2 and extend them forwards, return to position 2 and position 1.

8.

Hips firm (hands placed as in 3). Raise the heels a little, bend the knees slightly outwards and keep the upper part of the body perfectly erect. Lower the body about half-way down, then raise it again.

9.

Same as 8, only go down as low as possible. It is not easy at first to keep one's balance, the upper part of the body erect all the time, especially when trying to rise. Return to position 1.

Fig. 10.

Fig. 11.

Fig. 12.

10.

Arms bend (*see* 2). Place the feet sideways, about a foot apart. Now bend the upper part of the body back, curving only the chest back, keeping the waist still. Position 1.

11.

Bring arms to position 2 and extend upwards as in fig. 5. Now bend the body forwards till the hands nearly touch the floor, keeping the head between the arms, knees straight and arms straight and parallel to one another. Return to position 5, then position 2 and then position 1.

12.

Hips firm (*see* 3). Raise one knee till the leg is bent as in the illustration, keep toe pointed down. Do the same with the other leg. Return to position 1.

Fig. 13.

Fig. 14.

Fig. 15.

13.

Same as 12, only stretch leg backward as in illustration, keeping knees straight. Return to position 1.

14.

ARMS FORWARD BEND.—Bend the arms in front of the body, as in the illustration. Extend one foot back and rest toe on ground. Position 1.

15.

Arms as in 14. Fling right arm out sideways and turn head to the right as far as it will go without moving the rest of the body. Same to left. Position 1.

Fig. 16.

Fig. 17.

Fig. 18.

16.

Hips firm (*see* 3). Kneel with toes extended backwards. Now bend the body backwards from the knees, as far as possible, keeping straight and firm as in illustration. Rise and return to position 1.

17.

One arm, HIP FIRM, the other NECK REST (*see* 3 and 4). Bend the body as in exercise 4. Return to position 1.

18.

Arms bend (*see* 2). Feet stride (*see* 10). Now turn the body at the waist as far as possible to right, then to left, taking care not to move the hips. Return to position 1.

Fig. 19.

Fig. 20.

19.

LEAP ON THE SPOT.—Hips firm (*see* 3). Raise the heels, slightly bend at the knees as in illustration, jump and alight on toes again with knees slightly bent. Straighten knees and let heels sink to the ground. Position 1.

20.

Hips firm (*see* 3). Stand near a chair or bed and slip one foot sideways under a rail. Now bend sideways as far as possible. Position 1.

Fig. 21.

Fig. 22.

21.

As 20, only stand facing the support and bend back. Position 1.

22.

Kneel as in 16. Extend arms as in 6. Now turn the body from the waist as far to the right and as far to the left as possible. Position 1.

23.

Deep breathing (*see* BREATHING, CORRECT METHOD OF) should be practised several times during these exercises. Stand in position 1. Now raise the hands slowly to the level of the shoulders, keeping the arms straight and moving them sideways. While raising the arms, slowly fill the lungs with air, and when lowering them let it slowly out.

DUMBELL EXERCISE.

As an efficient and inexpensive way of developing all the muscles of the body dumbells have no rival. Especially are they valuable for those whose sedentary life forbids much active exercise, and as they only require a very short time each day for their practice, do not interfere materially with the work of the busiest. The accompanying exercises have been given with a view to the complete and symmetrical development of the body. They should be practised in their entirety every morning and evening, after rising and bathing and before retiring, in as nearly a nude a condition as practicable. And they should be practised with a serious and complete concentration of the mind upon each muscle as it is in turn exercised. This concentration is immensely fatiguing at first, but is necessary in order to derive full benefit from them. Just as in practising musical exercises for execution, a short time well spent is more valuable than a longer time with a wandering and uninterested mind, so in dumbell exercise it is above all the quality and not the quantity of the exercise which is of importance.

Increase the number of times each exercise is done weekly or daily, beginning say at 10 or 20, according to strength, and endeavouring to be able to be double this number in a short time.

Fig. 1a.

1a.—Arms by side forced well back, finger nails to front. Inhale.

Fig 1b.

1b.—Raise bells to shoulders, contracting biceps. Exhale.

Fig. 2a.

2a.—Arms by side forced well back, finger nails to rear. Inhale.

Fig 2b.

2b.—Raise bells to shoulders. Exhale.

Fig. 3a.

3a.—Extend arms sideways in line with shoulders, finger nails up. Inhale.

Fig. 3b.

3b.—Bring bells to shoulders, contracting biceps. Exhale.

Fig. 4a.

4a.—Arms by sides, chest well out. Inhale.

Fig. 4b.

4b.—Cross arms in front, contracting chest muscles. Exhale.

Fig. 5a

5a.—Arms extended in front level with chin. Exhale.

5b.—Bring bells back sideways in line with shoulders. Inhale.

Fig. 6a.

6a.—Upper arms close to sides, bells level with shoulders. Exhale.

6b.—Raise bells above head as far as possible. Inhale.

Fig. 7a

7a.—Arms by sides forced well back, finger nails to rear. Inhale.

Fig. 7b

7b.—Raise arms up level with shoulders rounding back. Exhale.

Fig. 8a.

8a.—Lean over to right, left knee bent, right leg straight.

8b.—Repeat to left.

Fig. 9a.

9a.—Lunge out to left, right leg straight, raising left hand above head, right hand at side.

9b.—Repeat to left.

Fig. 10a.

10a.—Heels together, chest well out, hands on hips.

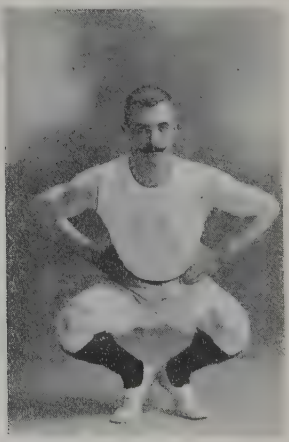


Fig. 10b.

10b.—Sink on toes, raising heels from ground, gradually resume upright position, keeping back straight.